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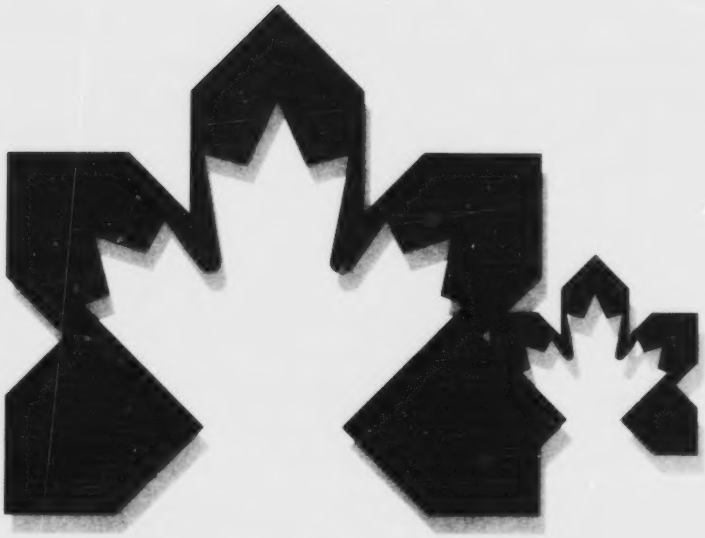
Public Housing Program

Program Evaluation Report

Summary



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EVALUATION OF THE PUBLIC HOUSING PROGRAM

SUMMARY REPORT

Program Evaluation Division
Canada Mortgage and Housing Corporation
April 1990

I. INTRODUCTION

The federal government has supported public housing under the auspices of Sections 79, 81 and 82 of the National Housing Act[1] which permit CMHC to cost-share with provinces and territories the costs related to the construction or acquisition of public housing projects and for their ongoing operation. Between 1949 when the first public housing program was introduced and 1985, when new construction under the program terminated, approximately 4,800 projects have been built containing some 205,000 dwelling units. This represents over 40 per cent of the portfolio of federally-assisted social housing.

Although new commitment activity under the program has ceased, the operation of this portfolio continues to consume 30 per cent of CMHC expenditures on social housing -- over $450 million annually. Originally a program designed to deliver new social housing, program activities are now focussed on the "property management" of a large, national, housing portfolio. It remains an important source of shelter for households in need. In pure financial terms, the public housing stock is a valuable asset which would be very difficult to replace.

Since its inception in 1949, the Public Housing Program has often attracted attention on issues such as community acceptance of projects with a "negative" image. Public housing tenants have often been stigmatized for living in these projects and nearby residents have often expressed concern and sometimes outright opposition to the location of projects in their neighbourhoods. Also, tenants have expressed concern about the character of the living environment provided by public housing projects.

In 1984, CMHC completed the first major regeneration of a public housing project in Regina (Regent Court) as concerns about the Public Housing Program were broadening to other issues. Increasingly, concerns were being focussed on the physical condition of the stock and several factors were cited as contributing to its deteriorating condition, including the aging process, changing construction standards, tenant abuse and inadequate maintenance. In 1986, CMHC started the regeneration of a second public housing project in Halifax (Uniacke Square). Other provinces began to identify projects in their portfolios which would benefit from regeneration-type interventions.

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[1] As a result of recent statute revisions, Section 40, 43 and 44 of the National Housing Act are now numbered Sections 79, 81 and 82, respectively.

At the same time, there was heightened federal and provincial interest in the overall management of the public housing stock. In particular, the physical state of the existing public housing portfolio was an area of increasing concern. Both this and administrative economies in public housing were discussed at the Housing Ministers Conference in July 1986. In 1986, federal, provincial and territorial housing ministers identified the proper maintenance, preservation and overall management of the existing social housing stock, particularly the public housing stock, as a major priority. As a result, the Federal/Provincial/Territorial Sub-Committee on the Maintenance and Preservation of the Existing Housing Stock was formed. Due to the large size of both the public housing stock and its associated annual budgetary expenditures, the Public Housing Program has been identified as a particularly important area of concern. Enhanced portfolio management of the social housing stock is also emphasized in recent CMHC Strategic Plans.

In the absence of information on the overall state of the public housing stock, it has not been possible to date to consider alternative strategies for dealing with an aging public housing stock in a systematic fashion. To this end, an evaluation of the Public Housing Program was authorized by CMHC Management Committee in August, 1987.

The evaluation provides an assessment of the extent to which the program is currently achieving its objectives (as set by government) and at what costs. Four main issue areas were examined in the evaluation: the physical condition of the stock, management performance, operating expenses, and the quality of life experienced by the program's clients. The evaluation sets the stage for a policy and consultation process on options for the future management of the public housing stock.

The evaluation draws on a number of data sources compiled specifically for the evaluation, including: a physical condition survey, questionnaire surveys of clients and project managers, data bases containing detailed information on project characteristics and operating expenses, provincial and territorial Guidelines and Procedures manuals, a follow-up telephone survey of provincial and territorial public housing administrators and a series of eight case studies which explore the need for conversions, redesign or redevelopment and clarify the issues associated with these major upgrading activities.

II. PROGRAM BACKGROUND, CHARACTERISTICS OF THE STOCK AND PROGRAM CLIENTS

A. The History of Public Housing in Canada

The Public Housing Program was established by amendments to the National Housing Act which were adopted in 1949. Under the Section 79 Federal/Provincial Public Housing Program, CMHC and the government of a province or territory entered into agreements for the construction or acquisition of public housing projects. Capital costs were shared 75/25 by the federal and provincial or territorial governments respectively. The provinces and territories, in turn, could request that municipalities participate in their 25 per cent share. Amortization of the costs was spread over a period of up to 50 years with interest rates set by the partnership. Operating losses on the Section 79 projects are cost-shared on the same basis as the original project costs.

Rents charged to the occupants are based on the federal or a provincial/territorial rent-geared-to-income scale and generally equal 25 per cent or less of a household's income (except in British Columbia and New Brunswick where the upper range has been revised upward to 30 per cent). Federal subsidies are calculated according to the scale producing the higher revenues.

While CMHC accepted responsibility for approving, planning and designing public housing projects, the management and administration of the projects and the program's clients were in most cases taken on by the provinces. Responsibilities for day-to-day management of public housing projects were often delegated to local housing authorities, or their equivalent, established by provinces and territories.

Amendments to the NHA adopted in 1964 introduced two additional programs -- the Section 81/82 Regular Public Housing Program and the Section 82 Provincially-Financed Public Housing Program. Under Section 81 of the NHA, CMHC made long term loans to provinces, territories, municipalities, or public housing agencies for the construction or acquisition of a public housing project. The loan could not exceed 90 per cent of the approved project capital costs and had an amortization period of up to 50 years. Ownership of the projects was retained by the provinces, territories, municipalities or public housing agencies.

Section 82 authorized CMHC to absorb 50 per cent of operating losses associated with public housing projects for a period not exceeding 50 years. Rents charged to the occupants are based on the same federal or provincial/territorial rent-to-income scales as employed in the Section 79 Federal/Provincial

Program. Under the Section 82 Provincially-Financed Program, the projects were financed entirely by the provinces and territories (i.e. there were no Section 81 loans involved). Provincial interest and program take-up increased with the introduction of the new programs. The dramatic increase in the use of these programs under the NHA provided a strong impetus to the provinces to establish housing agencies of their own.

In 1978 the Section 81/82 Regular and Section 82 Provincially-Financed Programs were terminated, except in the Northwest Territories where activity continued until the end of 1983. At the same time, the use of Section 79 was restricted to those provinces and territories that had used it over the past decade, (i.e. Newfoundland, New Brunswick, Prince Edward Island, Nova Scotia, Saskatchewan and the Northwest Territories). With the introduction of the new social housing package in 1986, new commitment activity ceased under Section 79. Section 95 now provides the legislative authority for building social housing projects which are wholly targeted to low income households.

B. Characteristics of the Public Housing Portfolio

Although the Section 79 Public Housing Program was initiated in 1949, only 4.3 per cent of all units were developed prior to 1964 when the Section 81/82 programs were introduced. In fact, over two-thirds of all public housing units were developed during the 1970's. Fully four-fifths of the public housing portfolio has been financed under the Section 81/82 Program. Projects financed under Section 79 account for one-fifth of the portfolio.

By far, the largest proportion of the public housing stock is located in Ontario (Table 1). With 96,582 units, Ontario's public housing portfolio accounts for almost half of all units. Quebec has the next largest stock of public housing. Quebec's 35,632 units constitute a further 17.3 per cent of the total portfolio. The remaining provinces and territories account for just over one-third of all units.

Overall, the public housing portfolio has a fairly young age profile. Fully 87.2 per cent of all public housing units are less than 20 years old; just under one-fifth are less than 10 years old. The oldest public housing stock (developed prior to 1970) is most prevalent in Ontario, Newfoundland, New Brunswick and British Columbia. The youngest stock is found in the Northwest Territories, Prince Edward Island, Alberta and Saskatchewan.

A large variety of project types have been constructed or acquired under the Public Housing Program (Table 2). Approximately one-quarter of all public housing units are

TABLE 1
PUBLIC HOUSING PORTFOLIO BY PROVINCE AND TERRITORY

PROVINCE/TERRITORY	PROJECTS NUMBER	PROJECTS PER CENT	UNITS NUMBER	UNITS PER CENT
Newfoundland	176	3.7	4,710	2.3
Prince Edward Island	90	1.9	951	0.5
Nova Scotia	477	9.9	10,288	5.0
New Brunswick	157	3.3	3,892	1.9
Quebec	630	13.1	35,632	17.3
Ontario	1,329	27.6	96,582	47.0
Manitoba	336	7.0	12,808	6.2
Saskatchewan	577	12.0	12,353	6.0
Alberta	531	11.1	16,899	8.2
British Columbia	100	2.1	7,978	3.9
Yukon	22	0.5	261	0.1
Northwest Territories	376	7.8	3,338	1.6
CANADA	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

contained in projects solely made up of detached, semi-detached or row housing. Low-rise apartment projects (buildings with less than four storeys) contain another quarter of all units. Projects consisting of high-rise apartment buildings (with four or more storeys) constitute only 11.4 per cent of all projects but contain 38.8 per cent of all units.

While the majority of public housing projects are relatively small in size, a substantial proportion of all units are contained in large projects. Fully 77.2 per cent of all projects contain fewer than 50 units. Projects with 100 units or more constitute only 11.3 per cent of all projects, but account for roughly one-half of all units in the portfolio.

Roughly equal numbers of families and senior citizen households have been served under the Public Housing Program. While family projects dominated delivery prior to 1970, the majority of units delivered since 1970 have been developed for seniors. The mix of family and seniors projects varies considerably among provinces and territories. The Northwest Territories, Newfoundland and the Yukon have high proportions of their portfolios devoted to family projects (93.6, 91.3 and 74.7 per cent of total units, respectively). In contrast, public housing projects in Saskatchewan, Prince Edward Island, and Nova Scotia house principally seniors clients (73.3, 70.6 and 65.1 per cent of total units, respectively). The remaining provinces have more balanced portfolios.

TABLE 2
CHARACTERISTICS OF THE PUBLIC HOUSING PORTFOLIO

PROJECT CHARACTERISTICS	PROJECTS		UNITS	
	NUMBER	PER CENT	NUMBER	PER CENT
PROGRAM				
Section 79	1,444	30.1	41,254	20.1
Section 81/82	3,357	69.9	164,438	79.9
AGE OF STOCK IN 1988				
0 - 4 years	328	6.8	4,200	2.0
5 - 9 years	1,204	25.1	34,692	16.9
10 - 14 years	1,769	36.9	67,717	32.9
15 - 19 years	1,149	23.9	72,841	35.4
20 - 24 years	265	5.5	17,409	8.5
25 - 29 years	32	0.7	3,696	1.8
30 years and over	54	1.1	5,137	2.5
PROJECT TYPE				
Detached, Semi & Row	2,311	50.9	45,969	23.8
Low rise	1,537	33.8	45,980	23.8
High rise	517	11.4	75,089	38.8
Mixed (no high rise)	114	2.5	10,369	5.3
Mixed (with high rise)	64	1.4	16,097	8.3
PROJECT SIZE				
Less than 10 units	955	19.9	5,192	2.5
10 - 49 units	2,752	57.3	57,829	28.1
50 - 99 units	552	11.5	37,381	18.2
100 - 199 units	371	7.7	48,860	23.8
200 units or more	171	3.6	56,430	27.4
CLIENT TYPE				
Family	2,320	48.3	89,615	43.6
Senior	2,271	47.3	101,263	49.2
Family & Senior	192	4.0	14,247	6.9
Other	18	0.4	567	0.3
SETTLEMENT SIZE				
Rural	1,418	29.5	18,068	8.8
2,500 - 9,999	1,080	22.5	22,165	10.8
10,000 - 29,999	631	13.1	20,603	10.0
30,000 - 99,999	584	12.2	31,358	15.2
100,000 - 499,999	510	10.7	58,908	28.7
500,000 and over	578	12.0	54,590	26.5
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC 1988.

C. Profile of Public Housing Clients

Approximately 430,000 people reside in public housing projects nationwide. The majority of public housing residents are children and senior citizens. Fully one-quarter of public housing residents are children under the age of 15 years. A similar proportion of the population is aged 65 years or older. These two age groups account for one-half of all residents in public housing nationwide, as compared to one-third of the general population. Almost two-thirds of public housing residents are female, a reflection of the preponderance of female headship among single parent families as well as the greater longevity of women.

Differing targeting within the population in need is reflected in variations in the age profile of the client population across the country. For example, Manitoba, Alberta and Newfoundland have the highest proportions of clients aged under 15 years. In contrast, Saskatchewan, Prince Edward Island, Nova Scotia and Quebec have the highest proportions of clients aged 65 years or older. An emphasis on serving the elderly is most prominently displayed in Saskatchewan, where fully one-quarter of the client population is aged 75 years or older.

The characteristics of households residing in public housing are displayed in Table 3. Single person households clearly predominate among public housing residents, accounting for approximately one-half of all client households and 85.6 per cent of residents of public housing projects for senior citizens. Single parent households are the next largest group (24.1 per cent) and are almost twice as numerous as family households where both parents are present. Single parent families constitute one-half of all households residing in family public housing projects.

The large family households which were one of the principal client groups in the early years of the Public Housing Program are considerably less common today. In fact, just over 80 per cent of all client households consist of three or fewer persons while less than 10 per cent are composed of five or more persons. Approximately 15.5 per cent of all client households reported that one or more members were disabled or infirm.

Just under one-half of survey respondents reported that they had not attended high school (Table 4). Approximately 5 per cent indicated that they had not received any formal education.

TABLE 3
CHARACTERISTICS OF HOUSEHOLDS RESIDING IN PUBLIC HOUSING

HOUSEHOLD CHARACTERISTICS	PER CENT OF PUBLIC HOUSING CLIENTS				PER CENT OF ALL (1) RENTER HOUSEHOLDS
	FAMILY PROJECTS	SENIORS PROJECTS	FAM/SEN PROJECTS	ALL PROJECTS	
HOUSEHOLD TYPE					
One person living alone	14.6	85.6	37.0	52.0	40.4
One adult with children	50.1	0.3	36.0	24.1	10.2
Couple with children	28.5	0.7	12.8	13.3	20.5
Couple without children	3.6	12.9	10.8	8.7	17.8
Other	3.2	0.5	3.5	1.9	11.1
HOUSEHOLD SIZE					
One person	13.7	85.4	39.1	51.3	40.4
Two persons	24.6	13.7	17.6	18.5	29.8
Three persons	23.6	0.3	20.1	11.8	14.2
Four persons	18.0	0.6	18.6	9.4	9.9
Five persons	11.9	0.0	3.1	5.4	4.0
Six or more persons	8.2	0.0	1.5	3.6	1.7
DISABLED/INFIRM PERSON IN HOUSEHOLD					
Yes	9.0	21.7	11.7	15.5	N/A
No	91.0	78.3	88.3	84.5	N/A

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1988 HIFE Microdata, Statistics Canada.
NOTE: (1) Excluding renters in the Yukon and Northwest Territories.

The "working poor" constitute only a small percentage of client households. One-fifth of all respondents to the client survey and one-third of family clients reported being employed, compared with two-thirds of the heads of renter households in general. Three-quarters of the respondents to the public housing tenant survey are not in the labour force, compared with just under 30 per cent of heads of renter households in general.

Over one-third (35.8 per cent) of family clients have employment of some kind (full-time, part-time or self-employed); one-quarter are employed full-time. Just under one-third (29.8 per cent) are retired or unable to work due to disability. Approximately one-quarter of survey respondents in family projects reported being either unemployed and looking for work (12.6 per cent) or unemployed but not looking for work (12.4 per cent). The vast majority (83.8 per cent) of respondents in seniors projects are retired and a further 8.5 per cent reported being unable to work due to disability.

TABLE 4
SOCIO-ECONOMIC CHARACTERISTICS OF PUBLIC HOUSING RESIDENTS

	PER CENT OF PUBLIC HOUSING CLIENTS					PER CENT OF ALL (1) RENTER HOUSEHOLDS
CHARACTERISTICS	**FAMILY PROJECTS**	**SENIORS PROJECTS**	**FAM/SEN PROJECTS**	**ALL PROJECTS**		
EDUCATIONAL ACHIEVEMENT						
No formal schooling	4.8	5.6	7.3	5.3		N/A
Grade school	29.1	50.9	36.7	40.2		N/A
High school	44.7	33.1	46.8	39.3		N/A
Community college/CÉGEP	15.5	6.1	5.8	10.2		N/A
University	5.3	2.8	3.3	4.0		N/A
Other	0.6	1.5	0.1	1.0		N/A
EMPLOYMENT STATUS						
Full-time employee	24.9	1.6	9.8	12.5	18.7	66.9
Part-time employee	8.7	1.8	5.6	5.2		
Self-employed	2.2	0.0	0.5	1.0		
Unemployed & looking for work	12.6	1.0	16.6	7.2		4.6
Not employed & not looking for work	12.4	2.9	13.8	7.9	74.1	28.5
Retired	11.4	83.8	35.2	48.2		
Unable to work due to disability	18.4	8.5	14.6	13.3		
Other	9.6	0.4	3.9	4.7		

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1988 HIFE Microdata, Statistics Canada.
NOTE: (1) Excluding renters in the Yukon and Northwest Territories.

Just under one-third of survey respondents indicated that provincial or municipal social assistance was their major source of income (Table 5). A similar proportion rely principally on Old Age Security (OAS) and the Guaranteed Income Supplement (GIS). Employment income was the major source of income for less than one-fifth of survey respondents.

As would be expected, given the differences in employment status, income sources of public housing residents differ considerably from the general renter population. In 1988, 67.7 per cent of renter households reported that employment income was their major source of income, while 26.6 per cent cited government transfer payments and 2.3 per cent reported retirement pensions, superannuation and annuities.

TABLE 5
MAJOR SOURCE OF INCOME OF PUBLIC HOUSING RESIDENTS

	MAJOR SOURCE OF INCOME (PER CENT OF CLIENT HOUSEHOLDS)				
CHARACTERISTICS	**EMPLOYMENT INCOME**	**SOCIAL ASSISTANCE**	**OAS/ GIS**	**PENSIONS**	**OTHER**
CLIENT TYPE					
Family	32.1	48.2	4.8	4.8	10.1
Senior	2.5	9.8	59.4	20.2	8.1
Family & Senior	16.4	39.0	13.1	23.0	8.5
HOUSEHOLD TYPE					
One person living alone	2.7	16.1	57.8	16.8	6.6
One adult with children	24.2	62.7	1.1	3.5	8.5
Couple with children	56.9	28.3	0.2	2.1	12.5
Couple without children	13.7	5.5	21.5	43.5	15.8
Other	29.2	29.6	15.9	8.9	16.4
PROVINCE/TERRITORY					
Newfoundland	30.8	33.3	7.0	6.0	22.9
Prince Edward Island	11.0	10.0	68.8	2.8	7.4
Nova Scotia	12.9	20.3	51.1	7.9	7.8
New Brunswick	8.9	50.5	29.2	7.0	4.4
Quebec	6.9	38.7	4.2	46.0	4.2
Ontario	18.1	32.2	35.2	4.6	9.9
Manitoba	15.7	34.2	33.9	6.6	9.6
Saskatchewan	20.8	10.1	50.9	9.1	9.1
Alberta	23.9	17.7	37.9	6.7	13.8
British Columbia	23.2	28.3	33.9	5.4	9.2
Yukon	-	-	-	-	-
Northwest Territories	-	-	-	-	-
ALL	17.8	30.4	29.8	12.9	9.1

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and Northwest Territories.

Just under one-half of clients residing in family projects reported that provincial or municipal social assistance constitutes their major source of income. One-third of family clients report that employment was their major source of income. The majority (65.3 per cent) of clients in seniors projects rely on Old Age Security benefits or the Guaranteed Income Supplement as their major source of income.

Survey respondents reported annual household incomes which averaged $10,632. Annual household incomes are highly clustered within a narrow range (Table 6). Over one-half of households reported annual incomes of between $5,000 and $10,000. Over 80 per cent reported household incomes of between $5,000 and $15,000.

TABLE 6
ANNUAL INCOMES OF HOUSEHOLDS RESIDING IN PUBLIC HOUSING (1988)

	PER CENT OF PUBLIC HOUSING CLIENTS				PER CENT OF ALL (1)
HOUSEHOLD INCOME GROUPS	**FAMILY PROJECTS**	**SENIORS PROJECTS**	**FAM/SEN PROJECTS**	**ALL PROJECTS**	**RENTER HOUSEHOLDS**
Under $5,000	4.4	5.1	5.4	4.8	3.6
$5,000 - $9,999	50.6	60.1	57.4	55.9	14.6
$10,000 - $14,999	22.2	27.2	27.4	25.1	14.2
$15,000 - $19,999	12.4	6.1	6.6	8.8	11.8
$20,000 or more	10.3	1.5	3.2	5.4	55.9
ALL	100.0	100.0	100.0	100.0	100.0
AVERAGE INCOME	$11,752	$9,799	$9,796	$10,632	$26,892

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1988 HIFE Microdata, Statistics Canada.
NOTE: (1) Excluding renters in the Yukon and Northwest Territories.

Only small provincial variations in average household incomes are apparent. Average incomes of households in family projects ($11,752) are only marginally higher than those residing in seniors projects ($9,799). Single person households and single parent families reported the lowest average incomes ($9,088 and $10,031, respectively). Average household incomes ranged from a low of $8,069 (where municipal social assistance was reported to be the major source of income) to $17,250 (for households who reported that employment was the major source of income).

III. THE PHYSICAL CONDITION OF THE PUBLIC HOUSING STOCK

For the first time, the Physical Condition Survey provides a detailed, accurate and comprehensive assessment of the condition of Canada's public housing stock. The data base assembled from the Physical Condition Survey provides the basis for an accurate assessment of the degree to which the Public Housing Programs continue to provide structurally sound dwellings which are free of health and safety hazards and also for the estimation of the total cost of required repairs, replacements, additions and upgrades.

The Physical Condition Survey was completed using new inspection procedures developed by Program Evaluation Division in consultation with Research Division, Professional Standards Division and field inspection staff. The diversity of the stock demanded the development of a sophisticated means of assessing physical condition. In total, seven different inspection forms were designed to collect information concerning the condition of sites, buildings, units and parking structures. The inspections were completed by CMHC inspections staff who visited a total of 1,001 projects, 1,153 buildings and 2,483 units during 1987-88.

A. Condition Ratings

The public housing stock is in good condition overall. Whether using units, buildings, sites or projects as the unit of analysis, at least 94 per cent of the total portfolio meets or exceeds NHA minimum standards[1] (Table 7). Although the stock is generally in good condition, an estimated 169 projects (3.5 per cent), containing close to 13,000 public housing units (6.3 per cent), fail to meet minimum property standards (Table 8). In addition, more than half of all projects only minimally meet minimum property standards. These projects are at risk of falling below the standards.

The physical condition of the portfolio varies across provinces and territories (Table 9). This is not surprising, as the characteristics of individual provincial and territorial public housing portfolios also differ considerably in terms of the clients served and the age of the stock. In general terms, the condition of the public housing stock is the worst in Nova Scotia, New Brunswick and Newfoundland. Nova Scotia and New Brunswick both have around 10 per cent of their public housing projects failing NHA standards. It

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[1] National Housing Act: Minimum Property Standards for Existing Residential Buildings, Canada Mortgage and Housing Corporation, 1986.

TABLE 7
OVERALL CONDITION OF BUILDINGS, UNITS AND SITES IN PUBLIC HOUSING PROJECTS

NHA STANDARDS	CONDITION OF BUILDINGS (%)	CONDITION OF UNITS (%)	CONDITION OF SITES (%)
Fails	5.9	4.0	4.2
Meets	61.2	47.4	58.1
Exceeds	32.9	48.6	37.7
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 8
OVERALL CONDITION OF PROJECTS IN THE PUBLIC HOUSING PORTFOLIO

NHA STANDARDS	# OF PROJECTS	%	# OF UNITS	%
Fails	169	3.5	12,994	6.3
Meets	2,525	52.9	106,620	51.7
Exceeds	2,087	43.6	86,537	42.0
TOTAL	4,781	100.0	206,151	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, 1988.

should be noted that these failing projects include 30.9 per cent and 23.2 per cent of all public housing units in Nova Scotia and New Brunswick. In Newfoundland, although only 5 per cent of projects fail the NHA standards, these projects include more than 13 per cent of all public housing units in that province. At the other end of the spectrum, the condition of the stock is best in Manitoba and Saskatchewan measured either as the percentage of projects failing standards or as the percentage of public housing units located in projects failing the NHA standards.

Another important measure of the condition of the public housing stock is the percentage of the stock which just meet the minimum NHA standards and may be in danger of falling below these standards if proper maintenance is not adhered to or if necessary repair and replacements are not given proper attention. The public housing stocks of the Yukon, Alberta, Manitoba, Quebec, British Columbia and New Brunswick had the highest incidence of projects or units in projects just meeting the NHA standards at the time of the survey.

TABLE 9
PROJECT CONDITION BY PROVINCE AND TERRITORY (PERCENTAGE DISTRIBUTION OF UNITS BY PROJECT CONDITION RATINGS)

	NHA STANDARDS			
PROVINCE/ TERRITORY	FAILS %	MEETS %	EXCEEDS %	TOTAL %
Newfoundland	13.5	48.8	37.7	100.0
P.E.I.	4.5	58.4	37.1	100.0
Nova Scotia	30.9	39.9	29.2	100.0
New Brunswick	23.2	62.3	14.5	100.0
Quebec	4.5	75.7	19.8	100.0
Ontario	5.0	37.2	57.8	100.0
Manitoba	2.2	76.3	21.5	100.0
Saskatchewan	-	27.7	72.3	100.0
Alberta	4.4	80.3	15.3	100.0
British Columbia	7.0	62.5	30.5	100.0
Yukon	2.7	86.1	11.2	100.0
N.W.T.	3.6	55.6	40.8	100.0
CANADA	6.3	51.7	42.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

B. Costs for Repairs and Replacements

While condition ratings provide a good indication of the overall state of the public housing stock, cost estimates for repair and replacement provide a measure of the nature and magnitude of the corrective interventions needed. Repair and replacement cost estimates also allow the establishment of the current financial exposure of the provincial and federal governments to preserve the existing public housing stock.

The total estimated cost of undertaking repair and replacement actions is just under $350 million (Table 10). This represents an average cost of $1,693 per unit in the public housing stock. Over half of the total cost is required to complete repair and replacement actions on buildings (as opposed to the interior of the dwelling units or the sites on which the buildings are located). Actions on buildings include all repairs and replacements to the building exterior, foundations, service rooms, parking garages and common areas (e.g. entrance halls, corridors, meeting rooms, staircases, etc.)

Repairs and replacements to the interior of the dwelling units account for 36.6 per cent of total costs while repairs and replacements to project sites (e.g. paving, landscaping, walls and fences) account for the remaining 7.9 per cent of total costs. The inspectors indicated that $278 million or 79.4 per cent of all repair and replacement costs are required within 3 years.

TABLE 10
TOTAL AND PER UNIT REPAIR COSTS FOR UNITS, BUILDINGS AND SITES OF PUBLIC HOUSING PROJECTS

PROJECT COMPONENTS	TOTAL COST ($MILLIONS)	PER CENT OF TOTAL	COST/UNIT ($)
Units	127.9	36.6	620
Buildings	193.9	55.5	939
Sites	27.5	7.9	133
ALL	349.3	100.0	1,693

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

While they account for only 3.5 per cent of all projects, public housing projects which fail to meet NHA minimum property standards account for close to a quarter of all repair and replacement costs. In absolute terms, projects which minimally meet the NHA standards require the bulk of total repair and replacement expenditures with 58.6 per cent of total costs. The remaining 19.6 per cent of repair and replacement costs is accounted for by projects which exceed NHA standards.

The majority of projects do not require extensive repairs. Roughly one-half of all projects require less than $10,000 in repairs and replacements (Table 11). Together, these projects require less than 2 per cent of total repair and replacement needs. At the other extreme, a minority of projects require the majority of repair and replacement costs. While only 2.8 per cent of all projects (133) have repair and replacement costs exceeding $500,000, these projects account for over 50 per cent of all repair and replacement costs ($180 million).

Measured in terms of repair and replacement costs per unit, almost one-half of public housing projects require less than $500 per unit (Table 12) and account for only 3.6 per cent of total repair and replacement costs. At the other extreme, a small percentage of projects (6.9 per cent), require $5,000 or more per unit and account for 44 per cent of total repair and replacement costs.

TABLE 11
TOTAL PROJECT REPAIR AND REPLACEMENT COSTS PER PROJECT

R&R COSTS PER PROJECT	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	% OF PROJECTS	% OF UNITS
Less than 2,500	0.61	0.2	29.7	19.3
2,500 - 4,999	1.49	0.4	8.1	4.4
5,000 - 9,999	3.41	1.0	9.8	4.5
10,000 - 24,999	15.62	4.5	19.8	13.7
25,000 - 49,999	20.18	5.8	11.3	11.7
50,000 - 99,999	24.13	6.9	7.3	7.9
100,000 - 249,999	60.90	17.4	8.6	14.5
250,000 - 499,999	42.85	12.3	2.6	8.6
500,000 or More	180.09	51.5	2.8	15.4
TOTAL	349.28	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 12
TOTAL PROJECT REPAIR AND REPLACEMENT COSTS PER UNIT

R&R COSTS PER UNIT	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	% OF PROJECTS	% OF UNITS
Less than 500	12.67	3.6	47.0	45.3
500 - 999	18.37	5.3	14.5	12.2
1,000 - 2499	82.87	23.7	22.8	24.0
2,500 - 4999	81.65	23.4	8.8	11.0
5,000 or more	153.72	44.0	6.9	7.5
TOTAL	349.28	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Five construction systems require in excess of $25 million in repair and replacement actions each. These are, in order of descending magnitude: surface finishes ($62.9 million), exterior walls ($38.7 million), roofs and ancillary features ($38.7 million), parking garages ($26.9 million) and windows ($26.1 million). Together, these five construction systems account for 55.3 per cent of all repair and replacement costs.

Four provinces and territories have repair and replacement costs per unit which are significantly higher than the national average of $1,693 per unit (Table 13). These are Newfoundland with $6,325 per unit, the Yukon with $5,180 per unit, British Columbia with $3,158 per unit and New Brunswick with $2,339 per unit. Three provinces have repair and replacement costs per unit which are significantly lower than the national average. These provinces are Manitoba with $274 per unit, Alberta with $741 per unit and Saskatchewan with $891 per unit. Prince Edward Island and Northwest Territories would also appear to have repair and replacement costs per unit which fall below the national average. Quebec, Ontario and Nova Scotia all have repair and replacement costs per unit which are not significantly different from the national average.

TABLE 13
TOTAL REPAIR AND REPLACEMENT COSTS BY PROVINCE AND TERRITORY

PROVINCE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT
Newfoundland	29.6	8.5	168,442	6,325
P.E.I.	0.9	0.3	10,274	942
Nova Scotia	19.7	5.6	41,507	1,903
New Brunswick	9.8	2.8	62,154	2,339
Quebec	61.6	17.6	97,573	1,731
Ontario	167.9	48.2	126,545	1,762
Manitoba	3.6	1.0	10,785	274
Saskatchewan	11.6	3.3	20,084	891
Alberta	12.7	3.6	24,038	741
B.C.	26.4	7.5	263,726	3,158
Yukon	1.3	0.4	63,885	5,180
N.W.T	4.2	1.2	11,149	1,287
CANADA	349.3	100.0	72,872	1,693

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

In absolute terms, Quebec and Ontario, due to the size of their portfolios, have the highest estimated costs for repair and replacements with $61.6 million and $167.9 million respectively. These costs account respectively for 17.6 per cent and 48.2 per cent of the total national costs, which for both provinces is representative of their respective share of units in the national public housing stock. Newfoundland and British Columbia, two of the provinces with higher than average repair and replacement costs per unit, together account for another 16 per cent of total national costs.

To a large extent, provincial and territorial variations in physical condition reflect differences in the composition of the public housing stock among these jurisdictions (i.e. age of the stock, client groups served). The impact of these and other factors on the condition of the portfolio are examined below.

C. Factors Influencing The Condition Of The Portfolio

Repair and replacement costs vary considerably across different components of the public housing portfolio (Table 14). Repair and replacement costs increase with the age of the stock. Average repair and replacement costs per unit decrease from under $1,000 for projects completed after 1974, to just under $2,000 for projects completed between 1970 and 1974, and finally to over $3,000 for projects completed before 1970.

Projects serving family clients require per unit repair and replacement expenditures of more than one and a half times the national average (per unit) and close to three times that for projects serving seniors clients only. Although they represent just under half of all units, public housing projects serving family clients or a mix of family and seniors clients require close to 75 per cent of all repair and replacement expenditures.

Overall, projects composed of either low-rise or high-rise apartment buildings have the lowest repair and replacement costs per unit at just over $1,200. Projects with a mix of building types, including or excluding high rises, have the highest repair and replacement costs per unit with close to $2,500 and $2,900 per unit respectively. This is a reflection of the fact that projects with a mix of building types are older than average and almost without exception serve a family clientele.

Per unit repair costs do not vary significantly according to either project size or municipality size categories. The only real exceptions to this observation are projects with 200 or more units (which require greater than average repair and replacement expenditures) and rural projects (which have considerably lower than average costs). This can be accounted for by the fact that large projects are older, on average, than other size categories while rural areas have the youngest stock and cater to a higher percentage of seniors clients than the national average.

A series of multivariate statistical analyses were undertaken to isolate the key factors associated with project condition. Among all of the variables examined, the age of the stock and the nature of the client served (families versus senior citizens) exert the greatest influence over project condition.

TABLE 14
TOTAL REPAIR AND REPLACEMENT COSTS BY PROJECT CHARACTERISTICS

PROJECT CHARACTERISTICS	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT
Program				
Section 79	85.0	24.3	59,074	2,050
Section 81/82	264.3	75.7	78,789	1,603
Project Age				
Pre - 1964	29.0	8.3	317,619	3,233
1964 - 1969	72.4	20.7	199,647	3,646
1970 - 1974	155.0	44.4	116,559	1,900
1975 - 1979	69.0	19.8	38,739	976
1980 - 1987	23.8	6.8	19,412	946
Client Type				
Family	228.8	65.5	99,820	2,676
Senior	95.9	27.5	42,044	916
Family & Senior	24.2	6.9	121,917	1,544
Other	0.4	0.1	-	-
Building Type				
Detached, Semi & Row	119.8	34.3	46,005	2,198
Low rise	60.3	17.3	40,650	1,260
High rise	91.7	26.3	177,278	1,226
Mixed (no high rise)	37.5	10.7	305,489	2,864
Mixed (with high rise)	39.9	11.4	622,995	2,484
Project Size				
Less than 10 units	8.4	2.4	8,179	1,416
10-49 units	85.7	24.5	32,098	1,470
50-99 units	46.9	13.4	86,317	1,244
100-199 units	84.5	24.2	232,911	1,651
200 units or more	123.6	35.5	740,371	2,326
Municipality Size				
Rural	14.6	4.2	10,963	920
2,500 to 9,999	31.3	9.0	32,878	1,632
10,000 to 29,999	40.1	11.5	45,252	1,553
30,000 to 99,999	62.1	17.8	69,056	1,795
100,000 to 499,999	103.2	29.4	207,427	1,781
500,000 or more	98.0	28.1	179,802	1,850
ALL	349.3	100.0	72,872	1,693

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Older projects and those housing families were generally in worse condition than newer projects and those housing senior citizens. A strong relationship was also observed between project condition and the level of maintenance expenditures in the eight years preceding the inspections, with projects in poorer condition having higher average maintenance costs.

D. Additions and Upgrades

The Physical Condition Survey also collected information on the need for additions and upgrades to the public housing stock in the areas of fire safety, lighting, ventilation, energy efficiency and durability/maintenance. These additions and upgrades are either necessary to meet current code requirements or would result in major cost savings in the opinion of the CMHC inspectors. In total, $133.4 million are needed to complete these additions and upgrades (Table 15). Additions and upgrades for energy efficiency make up the largest category ($54.8 million), followed by fire protection equipment ($35.0 million). Additions and upgrades for ventilation, lighting and durability/maintenance items are considerably smaller in magnitude, accounting for 19.5, 8.7 and 4.5 per cent of total costs, respectively.

TABLE 15
COST OF ADDITIONS AND UPGRADES TO THE PUBLIC HOUSING STOCK

CATEGORY OF ADDITION OR UPGRADE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS
Energy efficiency	54.8	41.1
Fire safety	35.0	26.3
Ventilation	26.0	19.5
Lighting	11.6	8.7
Durability/ Maintenance	6.0	4.5
TOTAL	133.4	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

E. Need for Modification of the Public Housing Stock: Conversion, Redesign and Redevelopment

Regeneration is the term usually used to describe the major modification of a public housing project. Regeneration is an all encompassing term which has come to be associated with a wide range of interventions which can address the upgrading of the public housing stock. The evaluation focused on three sub-components of the broader definition which are easier to define, conceptualize and measure: conversion, redesign and redevelopment.

Conversion is an upgrading activity which results in a net change in the number of units in a building and may involve a change in unit layouts. Conversion is generally required where a mismatch exists between the size of units available, and the household size and composition of potential clients. Redesign and redevelopment, on the other hand, refer to a range of actions which go beyond the repair and replacement of existing construction systems or even the addition or upgrade of particular systems. Redesign and redevelopment may be warranted for projects where the original design was poor or has become obsolete, where sites could be redeveloped to a higher and better use, or where the physical condition is so poor and repair/replacement costs are so high that an overall strategy for salvaging the project may be warranted. Redesign and redevelopment may also be a useful solution where changes in communities, either urban or rural, challenge the viability of the project.

The evaluation drew on two data sources in the examination of conversion, redesign and redevelopment. The principal data source was a series of eight case studies of public housing projects identified in the survey of project managers as having a conversion, redesign and/or redevelopment need. In addition to a need for conversion, redesign and redevelopment, other criteria were used to select projects for the case studies, including a failing condition rating provided by project managers and/or inspectors, high repair and replace costs and high annual operating costs. Projects were further selected to be representative of a range of project characteristics such as project size and type, client type and settlement size.

The case studies involved the collection of background information on each project. This included data from other data bases created for the evaluation, as well as project specific site plans and information. An on-site visit and interviews with project staff and tenants were undertaken, where feasible. A group of technical experts in the field of social housing administration reviewed the results of the case studies prior to their finalization.

The second source of information, the survey of public housing project managers, provides evidence on the incidence of potential for conversion, redesign and redevelopment within the public housing stock.

Conversion was found to be a costly physical intervention. Many conversions are from smaller units (i.e. bachelors) to larger units (i.e. one bedroom) and would result in a net decrease in the number of available units in the portfolio.

Approximately one-third of all projects with a need for conversions involve combining small units into larger ones. Conversion would be more justifiable if the units to be converted are in poor condition. Non-physical options such as a change in clientele for the units might be more practical solutions. Up to 2.2 per cent of projects and 5.7 per cent of units were identified as conversion candidates. Projects identifying a need for conversion were only considered if they also had a vacancy or turnover problem linked to unit size or type.

There is a need for redesign and redevelopment (modification/ regeneration) of a small portion of the public housing portfolio. The evaluation estimated that up to 500 projects (10.5 per cent of the portfolio) were candidates for some form of redesign and redevelopment. About 57 projects (1.2 per cent of the total portfolio) of these projects also do not meet meet NHA Minimum Property Standards. Although modification (regeneration) activities are not necessarily restricted to projects in poor condition, regeneration efforts to this date have been in projects which were in poor physical condition. These 57 projects are therefore the most likely candidates for redesign and redevelopment and constitute a lower-bound estimate.

Although estimating redesign and redevelopment costs is difficult, the evaluation provides a lower-bound estimate of $133 million (for 57 projects) and an upper-bound estimate of $289 million (for 500 projects). These estimates recognize that redesign and redevelopment needs are more serious in projects which fail the NHA standards. Furthermore, the lower-bound and the upper-bound estimates respectively include $50 million and $109 million in repairs and replacements included in the estimate of repairs and replacement for the stock as a whole.

The case studies identified redesign options including changes in site layout and major renovations leading to changes in the image and appearance of projects. They also identified redevelopment options including the addition and demolition of units as well as the addition of community facilities and non-residential uses. The addition of community facilities was an important option in large family projects, particularly large high-rise projects with few amenities suited to the needs and interests of children.

Not all projects with a redesign or redevelopment need have a major physical problem. Where major problems do exist the needs of the project are quite complex and warrant a thorough study. Many of the projects examined are experiencing a range of physical problems from major system failure due to poor original design. In addition, they could also be encountering social problems such as drug use and trafficking, vandalism and violence. In some instances, the social problems were the main cause of concern in the project.

The case studies have indicated that some physical solutions have not addressed and therefore have not resolved the social problem and its cause. Several case studies noted the importance of working closely with tenants and building their trust and support. The case studies also indicated that managers have undertaken repair work without understanding the implications of their actions or in the absence of a thorough plan.

Complex social and physical problems require sound planning and a multi-disciplinary team of experts to investigate all the evident problems within a project and all the solutions that may apply, without a predisposition to recommending physical changes. The use of individuals with experience in other modification projects would ensure that previous experience is transferable.

F. Program Level of Effort Required to Maintain an Adequate Public Housing Stock

Having assessed the physical condition of the public housing portfolio, the evaluation then considered whether past efforts and levels of maintenance and modernization and improvement expenditures have been sufficient to maintain the condition of the public housing stock at minimum property standards. The analysis considered first, whether the overall pool of maintenance and M&I funding was sufficiently large to meet needs, and second, whether maintenance and M&I funding were appropriately allocated according to need.

A backlog is defined as the volume of needed repairs, replacements, additions and upgrades beyond the normal annual accrual of need in any given year. The backlog is estimated by comparing the estimated cost of repairs, replacements, additions and upgrades identified at the time of the physical inspections with the available funding for maintenance and modernization and improvement (M&I) for 1988. This approach assumes that all funds available were appropriately allocated according to the need for repairs, replacements, additions and upgrades.

The Physical Condition Survey estimated that $349.3 million was needed for repairs and replacements to existing construction systems of public housing projects at the time of the inspections (November 1987 - March 1988). Another $133.4 million was required for additions and upgrades to meet current code requirements or to realize major cost savings. Undertaking these repairs and replacements and the additions and upgrades would therefore require an estimated $482.7

million. In comparison, a total of $273.5 million was budgeted for maintenance ($148.5 million) and M&I ($125 million) in 1988. Assuming that all of the funds budgeted for maintenance and modernization and improvements in 1988 were appropriately allocated according to need, a shortfall of $209.2 million would result (Table 17). The level of time and staff resources necessary in previous regeneration efforts indicate that any future national regeneration effort would have to be phased over several years. The cost estimates for redesign and redevelopment are therefore not included in the estimate of the backlog of repairs and replacements, additions and upgrades.

TABLE 17
ESTIMATION OF THE BACKLOG OF REPAIRS, REPLACEMENTS ADDITIONS AND UPGRADES TO THE PUBLIC HOUSING STOCK

1988 maintenance and M&I budget	$273.5 Million
Outstanding repairs and replacements	($349.3 Million)
Additions and upgrades	($133.4 Million)
BACKLOG	($209.2 Million)

The level of estimated backlog should be interpreted with some caution. At this point, no information is available on the annual accrual of repair and replacement needs in the public housing stock. It is therefore difficult to establish whether the backlog has increased or decreased in recent years.

The Administrative Expenses Data Base indicates that the level of combined maintenance and M&I expenditures has increased during the 1980's. Given an assumption that the annual level of expenditures for maintenance and M&I in recent years has exceeded the annual accrual of "new" repairs, replacements, additions and upgrades, the backlog could be decreasing.

Under this scenario, a continued increase in maintenance and M&I levels in future years could accommodate both the annual accrual of "new" need and the backlog identified in the Physical Condition Survey. This observation should be tempered by the fact that the level of "new" annual accrual of need is likely to increase with the aging of the stock.

Three major factors should be considered when interpreting the identified backlog of needs for repairs, replacements, additions and upgrades. First, given the aging of the public housing stock, the level of annual accrual of needs is likely to increase. Second, some of the repairs and replacements identified in the Physical Condition Survey could be phased over the next five years, although most repairs and replacements were required within three years. Finally, a better allocation of maintenance and M&I resources according to need could improve the effectiveness of existing maintenance and M&I funding and of any additional funding made available in the future.

G. Allocation of Resources According to Need

A comparison of annual expenditures on maintenance and M&I during the 1979-1986 period and project condition ratings and estimated repairs and replacement requirements in 1988 provides an indication of the extent to which maintenance and M&I resources have not been adequately allocated according to need.

Public housing projects which fail or minimally meet the NHA standards do so despite significantly higher levels of maintenance and M&I expenditures per unit over the previous eight years than projects exceeding the standards. Projects failing the NHA standards, which represent 6.2 per cent of all units, received just under 10 per cent of total annual expenditures of $154 million recorded between 1979 and 1986, but today require 21.8 per cent of all repair and replacement costs (Table 18).

Underfunding appears to have been particularly severe for public housing projects requiring $5,000 or more per unit for repairs and replacement. These projects represent 7.5 per cent of the units in the stock and received 13 per cent of maintenance and M&I funding in the 1979-86 period, but currently require close to 45 per cent of all repairs and replacement expenditures.

Project managers in one-fifth of all projects reported that they postponed maintenance in 1987 because of lack of budget and close to one-third postponed M&I work for this reason. The highest incidence of projects where maintenance was postponed were those which failed to meet NHA minimum property standards, followed by projects which just met the NHA standards. Almost half of all projects requiring $5,000 or more in repairs and replacements suffered from postponed modernization or improvement actions because of lack of budgets in 1987, higher than any other component of the portfolio. These projects also had the highest incidence of projects with postponed maintenance because of lack of budget in 1987 (close to 30 per cent).

TABLE 18
ESTIMATES OF AVERAGE ANNUAL COMBINED MAINTENANCE AND M&I EXPENDITURES (1979-1986) BY PROJECT CONDITION RATINGS (1987/88)

NHA STANDARDS	AVERAGE ANNUAL MAINTENANCE/M&I EXPENDITURES (1988 $MILLIONS)	PER CENT	PER CENT OF UNITS	PER CENT OF TOTAL REPAIR & REPLACEMENT COSTS
Fails	15.08	9.8	6.2	21.8
Meets	90.60	58.8	51.5	58.6
Exceeds	48.40	31.4	42.3	19.6
TOTAL	154.08	100.0	100.0	100.0

SOURCE: Administrative Expense Data Base, Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

NOTE: Average annual maintenance and M&I expenditures for the 1979-1986 period have been converted to 1988 dollars using the housing component of the Consumer Price Index (February 1988).

H. Potential Impacts of the Aging of the Stock on Physical Condition

In 1988, when the Physical Condition Survey was conducted, the public housing stock had an average age of 14 years and was still relatively young. The age profile of the stock will change rapidly over the next 15 years. By 1993, more than 60 per cent of public housing projects (about 3,000) will be more than 15 years old (Table 19). By the year 2003, all 4,801 projects will be older than 15 years and over 2,900 (61 per cent) of them will be over 25 years old.

The Physical Condition Survey found that older public housing projects were associated with deteriorating physical condition and higher incidence of failure to meet NHA Minimum Property Standards. Projection of current conditions indicates that an estimated 55 additional projects would fall below the NHA standards every five years. Under this scenario, by the year 2003 over 330 or 6.9 per cent of all public housing projects would fail to meet the NHA standards. In terms of units, the number of units in projects failing to meet the NHA standards would be more than double by the year 2003, reaching close to 29,000 units or 14.0 per cent of all units in the stock (Table 20). The percentage of units in projects which exceed the NHA standards would decrease from 41 per cent in 1988 to 39 per cent by 1993, and to 37 per cent by 2003.

TABLE 19
PROJECTED AGE OF THE PUBLIC HOUSING STOCK, 1988-2003

PROJECT AGE	PERCENTAGE OF PROJECTS 1988	1993	1998	2003
1 to 10 years	38.9	10.2	-	-
11 to 15 years	36.4	28.7	10.2	-
16 to 25 years	23.0	56.3	65.1	38.9
Over 25 years	1.6	4.9	24.7	61.1
TOTAL	100.0	100.0	100.0	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

TABLE 20
PROJECTION OF THE 1988 CONDITION OF PUBLIC HOUSING PROJECTS FOR 1993, 1998 AND 2003

NHA STANDARDS	PERCENTAGE OF UNITS 1988	1993	1998	2003
Fails	6.5	8.4	11.7	14.0
Meets	52.3	52.4	50.3	49.2
Exceeds	41.2	39.2	38.0	36.8
TOTAL	100.0	100.0	100.0	100.0

SOURCE: Project Characteristics Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

The aging of the stock will have an impact on the condition of the public housing stock and requirements for increased levels of maintenance, modernization and improvement expenditures. How fast this will occur and how large this increase will be is difficult to predict. As previously discussed, the Physical Condition Survey provides a snapshot of the condition of the stock at one point in time. There are no indicators of changes in the condition of the stock over time and of whether increased levels of maintenance and M&I expenditures in recent years have led to improvements in the overall condition of the stock. However, it is clear that enhanced management of the stock together with a reprofiling of expenditures to be more in line with need will go a long way toward addressing the future challenges of the public housing stock.

IV CLIENT SATISFACTION AND THE QUALITY OF LIFE

Data obtained through a survey of public housing residents provides the basis for the assessment of program targeting, the provision of adequate, suitable and affordable housing, client satisfaction and the quality of life provided in public housing projects. Conducted between November 1988 and March 1989, questionnaires were mailed to a total of 3,513 residents nationwide. Completed responses were returned by 2,798 residents (a response rate of 80 per cent).

A. Program Targeting, Housing Affordability and Core Need

The Public Housing Program is well targeted to households in need. Nationally, 96.1 per cent of all client households have incomes at or below the Core Need Income Threshold established for their area of residence. Core Need Income Thresholds estimate the income required to secure adequate and suitable accommodation without having to spend in excess of 30 per cent of household income for shelter costs.

In order to ensure that public housing is affordable to the program's clients, rents are geared to income. Under the Graduated Rent Scale, rents for fully serviced accommodation may range from 16.7 to 25 per cent of adjusted household income. Tenants receiving social assistance are required to pay the greater of the shelter component of welfare or the rent required under the Graduated Rent Scale. Provinces and territories are permitted to use their own rental scales. The only requirement established by CMHC is that the federal share of the subsidy be based on whichever scale produces the lowest subsidy. As a result of these flexibility provisions, significant variations exist among provinces and territories in terms of the calculation of eligible income, the items to be included in rent, and the rent-to-income ratio used in calculating the rent to be paid by tenants.

How affordable are public housing units? Average monthly shelter costs range from $218 for bachelor units to $347 for units with four or more bedrooms. Shelter costs include rent, water, gas, oil and electricity. Under the Graduated Rent Scale, rents charged for fully serviced accommodation (defined as including rent, heat, water, hot water, stove and refrigerator) are not to exceed 25 per cent of the household's adjusted income. Under some provincial and territorial rent scales, however, rental charges may be set at a higher proportion of income (e.g. 30 per cent). The Core Need indicator currently in use stipulates that a household has an affordability problem if it is required to spend 30 per cent or more of its income to obtain suitable and adequate shelter.

The data indicate that fully four-fifths of public housing client households spend 25 per cent or more of their household income on shelter (rent, water, gas, oil and electricity), while one-third spend at least 30 per cent (Table 21). Among those with affordability problems, the average difference between actual monthly expenditures and 30 per cent of income is $60. For one-third of these households, the difference is less than $25. Clients with affordability problems had lower household incomes, higher rents and higher expenditures on electricity than did households which spent less than 30 per cent of household income on basic shelter costs.

TABLE 21
SHELTER-COST-TO-INCOME RATIOS

RATIO OF SHELTER COSTS TO INCOME (PER CENT)	PER CENT OF HOUSEHOLDS	CUMULATIVE PER CENT
Less than 5	0.0	0.0
5.0 - 9.9	0.2	0.2
10.0 - 14.9	1.4	1.6
15.0 - 19.9	6.9	8.5
20.0 - 24.9	11.1	19.6
25.0 - 29.9	45.8	65.4
30.0 - 34.9	16.4	81.8
35.0 - 39.9	8.3	90.1
40.0 - 44.9	2.7	92.8
45.0 - 49.9	2.8	95.6
50 or more	4.4	100.0

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.
NOTE: Shelter costs include payments made for rent, water electricity, gas and oil.

The incidence of households spending 30 per cent or more of household income for shelter is highest in British Columbia and New Brunswick, where 77.8 per cent and 73.1 per cent, respectively, of client households spend 30 per cent or more of their household income on shelter costs. This finding is not surprising since neither province uses a graduated rent scale and both charge clients a flat 30 per cent of adjusted income for rent. The incidence of shelter-cost-to-income ratios of 30 per cent or more is considerably higher among family households (44.4 per cent) than seniors (25.4 per cent) and is particularly high among single parent families (49.3 per cent). The proportion of income spent on shelter rises with increasing household size.

The incidence of shelter costs being equal to or greater than 30 per cent of household income was only marginally higher among social assistance recipients (37.7 per cent) than other households (33.1 per cent). However, because the income received by social assistance recipients is in part determined by the shelter component of social assistance benefits, shelter-cost-to-income ratios for this group may not be reliably convey an indication of housing affordability.

Provincial and territorial variations in rental scales have an impact on the relative affordability of public housing provided to clients residing in different parts of the country. Almost four-fifths of client households pay more for fully serviced accommodation than the rent applicable under the Federal Graduated Rent Scale. The average difference between reported rents and estimated GRS rents is $28.

The core need indicator incorporates three dimensions of need: affordability, adequacy and suitability. A household is judged to be in core need if it has insufficient income to obtain adequate and suitable housing without experiencing an affordability problem. The determination of whether a household has sufficient income to obtain suitable and adequate housing within their local area is made by comparing the household's income to the applicable Core Need Income Threshold. The indicator of housing adequacy currently incorporated in the Core Need indicator is that of the "need for major repairs". The suitability of dwelling units is determined by reference to the National Occupancy Standard which ensures that crowding problems do not exist and that an adequate number of bedrooms is available for the household. Bachelor or studio apartments have been assumed to be equivalent to one bedroom units for the purpose of this analysis.

Estimates of the incidence of core need among public housing clients are presented in Table 22. This analysis estimates that 39.9 per cent of client households remain in core need despite the assistance provided to them under the Public Housing Program. The principal problem experienced is one of housing affordability (shelter costs comprising 30 per cent or more of household income). Fully 80.9 per cent of client households who are estimated to be in core need have affordability problems (either affordability alone or in conjunction with other problems).

The estimated incidence of core need is highest in British Columbia (71.8 per cent) and New Brunswick (68.9 per cent) and and is roughly twice as high among residents of family projects as residents of seniors projects (Table 23). Social assistance recipients had a higher incidence of being in core need (46.8 per cent) than did other households (36.8 per cent). Among household types, the highest incidence of core need is found among single parent families, couples without children and "other" household types. The incidence of core need increases with household size.

TABLE 22
CORE NEED AMONG PUBLIC HOUSING CLIENTS

PROBLEM	INCIDENCE (PER CENT)	PROPORTION OF TOTAL
Affordability only	25.3	63.6
Adequacy only	5.5	13.9
Suitability only	1.8	4.5
Affordability and Adequacy	4.8	12.1
Affordability and Suitability	1.4	3.4
Adequacy and Suitability	0.3	0.7
Affordability, Adequacy and Suitability	0.7	1.8
ALL	39.9	100.0

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

B. Improvements in Housing Conditions

Another measure of program performance is the extent to which public housing has improved the living conditions of clients. Most public housing residents were previously housed in either the private rental market (45.0 per cent) or the private ownership market (23.3 per cent). Approximately one-fifth moved to their current unit from a different public housing project, or another unit in the same project. High rental costs and inadequate dwelling size were the most commonly reported reasons for moving to public housing, cited by 57.1 and 44.4 per cent of respondents, respectively, as being either "somewhat" or "very" important reasons for their move (Table 24). Other frequently cited reasons were the poor state of repair of their dwelling (35.4 per cent) and the need to establish their own household (33.9 per cent).

Family and senior citizen clients share many of the same reasons for moving to public housing. However, inadequate space was cited with greater frequency by family clients as being an important factor in their decision to move. Moving in response to infirmity or disability was more prevalent among senior citizen clients than family clients, as was the desire to be near friends and family. Having applied for a public housing unit, the majority of clients were allocated a unit within six months (61.3 per cent). Over 78 per cent of respondents reported that they obtained a unit within one year of application.

In comparing their current housing unit to the one they occupied previously, respondents cited improvements in rental costs (67.1 per cent), dwelling size (64.3 per cent), state of

TABLE 23
INCIDENCE OF CORE NEED AMONG PUBLIC HOUSING CLIENTS BY SELECTED CHARACTERISTICS

CHARACTERISTICS	PER CENT OF HOUSEHOLDS
PROVINCE/TERRITORY	
Newfoundland	61.0
Prince Edward Island	52.7
Nova Scotia	43.3
New Brunswick	68.9
Quebec	34.3
Ontario	38.2
Manitoba	51.3
Saskatchewan	20.6
Alberta	37.0
British Columbia	71.8
Yukon	-
Northwest Territories	-
CLIENT TYPE	
Family	51.4
Senior	27.4
Family & Senior	42.2
SOURCE OF INCOME	
Social Assistance	46.8
Other	36.8
HOUSEHOLD TYPE	
One person living alone	27.6
One adult with children	56.4
Couple with children	55.2
Couple without children	32.1
Other	57.1
HOUSEHOLD SIZE	
One person	27.4
Two persons	42.7
Three persons	50.2
Four persons	54.0
Five or more persons	63.7
ALL	39.9

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

repair (56.6 per cent) and privacy/independence (53.0 per cent) (Table 25). These are areas which most closely conform to formal program objectives (affordable, suitable and adequate housing). The Public Housing Program has been less

TABLE 24
REASONS FOR MOVING INTO PUBLIC HOUSING

REASONS FOR MOVING	FAMILY PROJECTS PER CENT	SENIORS PROJECTS PER CENT	ALL PROJECTS PER CENT
Poor state of repair	35.4	32.8	35.4
Unit too large	15.2	21.0	18.0
Unit too small	58.4	25.4	44.4
Rental costs too high	57.7	54.4	57.1
Too much crime/vandalism	25.5	20.4	23.6
Lack of shopping, recreation or health care	24.8	31.8	28.4
Moved to be near friends or family	15.4	34.0	24.2
Infirmity or disability	14.3	32.6	23.6
Evicted from unit	5.2	3.4	4.8
Needed to establish own household	36.6	30.6	33.9

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Reasons cited by clients as being either somewhat or very important in their decision to leave their previous residence.

TABLE 25
COMPARISON OF CURRENT TO PRIOR CONDITIONS

	PER CENT OF HOUSEHOLDS		
ASPECT	MUCH WORSE	SAME	MUCH BETTER
State of repair	5.8	37.6	56.6
Size of apartment	9.5	26.2	64.3
Rental costs	5.6	27.3	67.1
Crime/vandalism problems	24.8	44.3	30.9
Closeness to shopping & recreational facilities	6.9	48.6	44.5
Closeness to friends & family	8.4	56.7	34.9
Privacy or independence	8.7	38.3	53.0

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

successful in generating improvements in terms of providing safe environments. When comparing their current dwelling to the one they occupied previously, almost one-quarter of survey respondents reported worse conditions with respect to crime and vandalism, only slightly less than the proportion citing improvements (30.9 per cent). Among family clients, a greater proportion reported worse problems with crime and vandalism conditions (35.6 per cent) than reported improvements (21.6 per cent).

C. Client Satisfaction and Quality of Life

Most clients are satisfied with their dwelling unit and nearby area overall. Only 12.6 per cent of respondents expressed overall dissatisfaction with their home, compared to 23.2 per cent cited by a survey of renter households in general (Table 26).

TABLE 26
SATISFACTION WITH DWELLING UNITS AND NEARBY AREAS
PUBLIC HOUSING CLIENTS VS. ALL RENTER HOUSEHOLDS

	PER CENT OF HOUSEHOLDS		
SATISFACTION RATING	PUBLIC HOUSING CLIENTS	ALL RENTER HOUSEHOLDS	ALL HOUSEHOLDS
Very satisfied	55.0	33.3	54.5
Somewhat satisfied	32.4	43.5	32.3
Somewhat dissatisfied	10.2	13.1	8.1
Very dissatisfied	2.4	10.1	5.1
ALL	100.0	100.0	100.0

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; and Focus Canada Survey, Environics Research Group, January, 1989.

Some differences are apparent in the level of satisfaction expressed by different client groups. Fully 95.6 per cent of residents of seniors projects expressed satisfaction with their dwellings and nearby areas compared to 79.2 per cent for family projects and 80.6 per cent for mixed family/senior projects. Public housing clients in New Brunswick, Newfoundland, Ontario, Nova Scotia and Manitoba expressed the greatest overall dissatisfaction with their dwellings and nearby areas. Higher levels of satisfaction were observed among residents of newer projects. Among age categories, the greatest dissatisfaction was expressed with projects completed between 1964 and 1969 (24.2 per cent). Other components of the portfolio with the highest incidence of dissatisfied clients were projects with a mixture of building types, both with high rises (23.9 per cent) and without high rises (20.4 per cent); projects with under 10 units (21.5 per cent) and projects located in cities with 100,000 or more population (16.7 per cent).

While clients are generally satisfied with their homes overall, higher levels of dissatisfaction were cited with respect to specific aspects of their home or broader living environment (Table 27). The greatest dissatisfaction was expressed over the way projects are run (19.4 per cent). When individual aspects of project management are examined, security emerges as a major concern (with 26.2 per cent of clients expressing dissatisfaction with project management in this area) (Table 28). Clients also expressed a similar degree of dissatisfaction with the speed with which their requests were responded to by project staff.

TABLE 27
DETAILED CLIENT SATISFACTION RATINGS

	PER CENT OF HOUSEHOLDS		
ITEM	NOT SATISFIED	SATISFIED	VERY SATISFIED
ALL PROJECTS			
Dwelling interiors	13.4	61.4	25.2
Project buildings	12.1	67.9	20.0
Project grounds	14.8	60.0	25.2
Way project is run	19.4	59.0	21.6
Rent-to-income	12.6	66.1	21.3
Nearby area/community	8.8	65.1	26.1
Shopping, health care etc.	13.1	55.0	31.9
FAMILY PROJECTS			
Dwelling interiors	17.8	65.1	17.1
Project buildings	18.8	67.8	13.4
Project grounds	25.2	58.3	16.5
Way project is run	27.3	58.0	14.8
Rent-to-income	17.0	60.5	22.6
Nearby area/community	11.8	62.7	25.5
Shopping, health care etc.	14.2	52.1	33.7
SENIORS PROJECTS			
Dwelling interiors	9.2	57.9	32.9
Project buildings	4.9	68.3	26.8
Project grounds	5.3	60.9	33.8
Way project is run	11.5	60.2	28.3
Rent-to-income	8.8	70.2	21.0
Nearby area/community	4.8	67.0	28.2
Shopping, health care etc.	10.9	57.6	31.5

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

TABLE 28
CLIENT SATISFACTION WITH PROJECT MANAGEMENT

ITEM	PER CENT OF HOUSEHOLDS NOT SATISFIED	SATISFIED	VERY SATISFIED
ALL PROJECTS			
Maintenance of grounds	14.2	56.4	29.4
Repairing of unit	19.7	53.7	26.6
Security	26.2	52.1	21.7
Information (comm/social serv)	17.0	62.7	20.3
Information about project	18.9	63.5	17.6
Speed in handling requests	25.2	52.0	22.8
FAMILY PROJECTS			
Maintenance of grounds	20.3	59.9	19.8
Repairing of unit	31.6	50.1	18.3
Security	41.9	45.2	12.9
Information (comm/social serv)	28.1	61.0	10.9
Information about project	28.3	61.8	9.9
Speed in handling requests	38.2	46.2	14.6
SENIORS PROJECTS			
Maintenance of grounds	7.3	54.2	38.6
Repairing of unit	8.0	57.7	34.2
Security	11.4	58.2	30.4
Information (comm/social serv)	7.3	63.7	29.0
Information about project	9.0	65.3	25.7
Speed in handling requests	12.9	57.8	29.3

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Overall satisfaction levels of public housing clients with respect to the maintenance of grounds and common areas, security against crime and vandalism and the speed with which requests are handled by the property manager are similar to those recorded by renter household in general (Focus Canada Survey, Environics Research Group, January 1989). A higher proportion of public housing clients reported that they were satisfied with unit repairs (80 per cent) than did renters in general (71 per cent).

As was the case with other aspects of public housing, families expressed greater dissatisfaction with project management than did seniors. The disparity in levels of dissatisfaction between family and seniors clients was most pronounced with respect to the provision of information concerning community and social services, the repairing of dwelling units and security. Almost one-half (41.9 per cent) of all family clients were dissatisfied with project security.

The majority of public housing residents reported that key facilities and services (health care services, social support services, child day care, parks and play areas, and meeting rooms) were available on-site. Generally speaking, seniors projects appear to be better serviced than those serving families (with the exception of family-oriented services such as child day care and parks and play areas). High levels of satisfaction were reported with respect to on-site facilities and services, where they had been made available. The highest incidence of client dissatisfaction was recorded for parks and play areas (21.7 per cent) and meeting rooms (18.2 per cent) in family projects.

Most important facilities and services are accessible to public housing clients within the nearby community. Out of a list of fifteen possible facilities and services, all were reported to be available by at least 85 per cent of public housing residents with the exception of gardening areas (68.7 per cent) and child day care (65.5 per cent). Client satisfaction with community facilities and services is generally high. The highest incidence of client dissatisfaction was expressed with gardening areas (24.4 per cent), parks or play areas (14.8 per cent), entertainment (14.3 per cent), recreational facilities (13.2 per cent) and child day care (11.6 per cent). As was the case with on-site facilities and services, satisfaction with community facilities and services is greater among senior citizens than family clients.

Survey data confirm that crime is viewed by both residents and project managers to be a significant problem in public housing projects. Almost half of all respondents reported that vandalism and property theft were problems in their project and just over one-quarter reported problems with drug dealing and assault (Table 29). Just over one-third of survey respondents reported that one or more of the four types of crime identified (i.e. property theft, vandalism, drug dealing and assault) were a major problem in their project. In family projects, the figures are much higher (57.5 per cent). Crime problems threaten the achievement of the objectives of providing "decent, safe and sanitary housing".

Project managers' assessments of the incidence of problems with criminal activity conform fairly closely to those provided by public housing residents. The principal distinction between client and property manager assessments is that property managers more frequently judged the problems to be "minor" as opposed to "major" problems than did residents. This finding is not altogether surprising, insofar as residents are both in a better position to be aware of criminal activity and are most directly affected by it.

TABLE 29
SEVERITY OF CRIME PROBLEMS
RESIDENTS' AND PROJECT MANAGERS' ASSESSMENTS

	PER CENT OF SURVEY RESPONDENTS		
PROBLEM	MAJOR PROBLEM	MINOR PROBLEM	NOT A PROBLEM
RESIDENTS' ASSESSMENT			
Vandalism	20.7	24.9	54.3
Property theft	15.1	27.6	57.3
Drug dealing	18.8	10.0	71.2
Assault	12.0	14.8	73.2
PROJECT MANAGERS' ASSESSMENT			
Vandalism	13.1	37.7	49.2
Property theft	7.9	34.0	58.1
Drug dealing	12.6	12.6	74.8
Assault	6.5	19.3	74.2

SOURCE: Survey of the Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Nonetheless, given the fact that security is the area of project management where clients have expressed the greatest dissatisfaction, these data suggest that project managers may underestimate the importance of addressing the problems associated with criminal activity in public housing projects.

The incidence of crime being reported as a major problem is markedly higher among residents of family projects than those residing in seniors projects (20 times as high in the case of drug dealing, 7 times as high for vandalism and for assault and 6 times as high for property theft) (Table 30). Crime also appears to be largely associated with projects located in urban areas with populations of 100,000 or more. The principal exception to this trend is that of assault, which is almost as prevalent in rural areas and small towns with fewer than 10,000 people as it is in larger cities.

Generally speaking, problems with crime do not appear to be a feature of public housing per se, but rather are reflective of the dynamics of crime prevailing in the community at large (e.g. related to low incomes, large cities, etc.). The incidence of major problems with vandalism in family housing projects (as revealed in residents' perceptions) were generally similar to those recorded by renters and low-income households in general with respect to their areas of residence (Focus Canada Survey) (Table 31). However, the incidence of major problems with property theft, assault and drug dealing reported by family clients were generally lower than those

TABLE 30
INCIDENCE OF MAJOR CRIME PROBLEMS BY SELECTED PROJECT CHARACTERISTICS

	PER CENT OF RESPONDENTS REPORTING THAT CRIME IS A MAJOR PROBLEM				
PROJECT CHARACTERISTICS	**THEFT**	**VANDALISM**	**DRUG DEALING**	**ASSAULT**	**ONE OR MORE TYPE(S) OF CRIME[1]**
PROVINCE/TERRITORY					
Newfoundland	3.9	15.0	13.3	3.5	24.4
Prince Edward Island	4.1	2.7	2.5	0.5	6.8
Nova Scotia	14.2	13.6	17.8	11.6	21.3
New Brunswick	20.4	18.6	21.3	12.1	36.1
Quebec	13.8	13.5	9.6	9.3	24.4
Ontario	15.7	29.6	27.5	15.0	44.3
Manitoba	22.5	14.6	16.7	9.4	37.9
Saskatchewan	5.5	5.1	2.4	4.1	8.9
Alberta	14.4	12.9	8.8	4.5	23.8
British Columbia	16.5	26.2	21.7	10.5	47.8
Yukon	-	-	-	-	-
Northwest Territories	-	-	-	-	-
CLIENT TYPE					
Family	24.5	34.7	36.0	20.5	57.5
Senior	4.0	4.8	1.8	2.9	8.9
Family & Senior	27.4	29.3	25.4	20.0	49.1
MUNICIPALITY SIZE					
Under 2,500	7.9	4.1	2.9	11.2	17.4
2,500 - 9,999	6.7	9.7	12.7	12.9	20.4
10,000 - 29,999	7.6	6.5	4.7	4.7	15.2
30,000 - 99,999	9.7	12.7	8.5	3.2	21.1
100,000 - 499,999	20.7	36.5	29.9	17.7	53.6
500,000 or more	22.1	24.5	29.7	15.5	45.8
PROJECT SIZE (UNITS)					
Under 10	11.2	1.3	2.5	10.6	14.2
10 - 49	7.2	9.5	7.7	8.7	17.9
50 - 99	13.1	10.5	7.7	6.8	23.4
100 - 199	17.3	31.1	23.1	12.4	46.0
200 or more	24.9	32.5	40.6	20.2	57.0
PROJECT TYPE					
Detached, Semi & Row	21.0	23.4	24.6	15.5	42.6
Low rise	5.8	7.6	3.9	3.8	11.0
High rise	10.8	22.1	13.7	10.6	34.1
Mixed (no high rise)	20.7	23.7	31.1	12.2	54.4
Mixed (with high rise)	32.4	38.8	57.8	30.7	68.7
ALL	15.1	20.7	18.8	12.0	35.1

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: [1] Property theft, vandalism, drug dealing or assault.

TABLE 31
RESIDENT ASSESSMENTS OF CRIME PROBLEMS
PUBLIC HOUSING VS. THE GENERAL POPULATION

	INCIDENCE OF CRIME BEING REPORTED AS A MAJOR PROBLEM			
	VANDALISM	**PROPERTY THEFT**	**ASSAULT**	**DRUG DEALING**
RESIDENTS	**PER CENT**	**PER CENT**	**PER CENT**	**PER CENT**
PUBLIC HOUSING				
All	20.7	15.1	12.0	18.8
Families	34.7	24.5	20.5	36.0
Seniors	4.8	4.0	2.9	1.8
COMPARISON GROUPS				
All households	28.6	34.3	19.6	38.0
All renters	35.1	40.2	28.4	49.5
Low-income[1]	36.1	39.2	25.0	49.4
Families[2]	26.5	33.3	17.5	39.1
Seniors[3]	28.3	37.8	20.6	37.5

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; data for comparison groups were obtained from the Focus Canada Survey, Environics Research Group, January 1989.

NOTE:
[1] Households with annual incomes of less than $15,000.
[2] Households with children under 18 years of age living at home.
[3] Respondent aged 60 years or more.

recorded among renters and low-income households. Major problems with crime in senior citizen projects were much lower than those reported by senior citizens in the population at large.

The extent to which residents of public housing projects are integrated within the surrounding community was another issue examined by the evaluation, using information supplied by respondents to the Survey of Public Housing Project Managers. Public housing project managers indicated that in the majority of the portfolio residents were somewhat closely involved in the nearby community and that community members met and visited fairly freely and regularly with project residents. In only one-fifth of the portfolio did project managers feel that residents were not in any way closely involved in the community. In one-quarter of the portfolio project managers reported that community members did not visit freely or regularly with project residents.

In only a very few cases did project managers indicate that there was clear evidence of severe isolation of residents from the community, whether reflected in community services not being regularly available to project residents (3.3 per cent), significant social barriers existing between residents and community members (9.1 per cent), project residents having severe difficulty in using community and social services (4.5 per cent), projects not requiring interaction with the community due to their relative self sufficiency (3.4 per cent) or projects being physically isolated from other residential communities (1.8 per cent).

When the Public Housing Program was initially devised, it was intended to be a source of temporary housing for households with transitory needs. The survey evidence suggests instead that for the majority of client households, public housing is serving as a source of medium-to-long-term accommodation. Well over one-half (60.3 per cent) of respondents reported that they have lived in public housing for at least five years. Just over one-quarter (26.2 per cent) reported that they have lived in public housing for 10 years or more.

Expressed moving intentions underscore the extent to which public housing is viewed by clients to be a medium to long term source of accommodation. Few respondents expressed the intention of moving (17.7 per cent). Fewer still could say when they intend to move (9.3 per cent). Only 3.5 per cent of respondents reported that they intend to move out of public housing within one year. By comparison, a recent survey of the renter population in general reported that 36 per cent of respondents indicated that they plan to move within one year (Focus Canada Survey, Environics Research Group, January 1989).

A portion of the public housing stock is underutilized. Just over 6 per cent of all units were vacant for one month or more during the year preceding the survey. The most common reasons for long-term vacancies were lack of need, physical condition and unit suitability. Vacancy rates were higher in rural areas, where underutilization is predominantly characterized by low need for public housing units. Projects with unsatisfactory facilities and services and those located near derelict or dangerous buildings had higher than average vacancy rates.

V MANAGEMENT PRACTICES AND PERFORMANCE

A. MANAGEMENT PERFORMANCE: PROJECT LEVEL

The evaluation examined management practices at the project level. Four areas of management at the project level were examined:

1. The level of staffing resources available;
2. The management of physical condition;
3. The management of unit preparation time; and
4. Tenant involvement in management.

While the majority of project managers are responsible for portfolios of less than 100 public and social housing units, the responsibility for the management of more than three-quarters of the total stock falls on the less than a quarter of all managers who manage portfolios of 200 units or more. Generally speaking, managers of older projects, projects which house family clients and those which are in the poorest condition are also responsible for larger portfolios.

Overall, the incidence of projects with on-site offices is fairly low (just under 20 per cent). However, aggregate analysis at the national level did not identify any relationship between the existence of on-site offices and tenant satisfaction. Travel time did not constitute a major problem for project managers, with only 11 per cent of managers reporting travel time to be a problem. Managers experienced more problems with travel time as the size of their portfolios increased.

The level of staff resources per 100 units was lower for older projects, larger projects, projects with high rise buildings and projects with a mixture of building types. Although economies of scale may be associated with larger and high-rise projects, it is questionable whether the savings are sufficiently large to account for their lower staffing levels than for smaller projects, projects composed of detached, semi-detached and row housing.

Overall, managers have considerable experience, with an average of 6.1 years as public housing managers. There are no great differences in the years of experience of project managers across various components of the public housing portfolio.

The highest level of training attained by project managers is commonly high school or the completion of a trades certificate. Only one-tenth of managers are Certified

Property Managers (CPM) or have received other designation or accreditation. Ontario, Manitoba, Saskatchewan and British Columbia account for almost all accredited managers. Within these four provinces the incidence of accreditation was higher among managers of older and larger projects.

The survey of public housing project managers indicated that maintenance and M&I were postponed from 1987 to another year in 24.2 and 34.0 per cent of projects, respectively. A lack of budget was the most common reason, reported in over 75 per cent of such cases, for postponement of maintenance and M&I. Although the analysis did not identify any strong relationship between postponement of maintenance and M&I and project condition, higher incidence of postponement was found for larger projects, more complex building types and family projects. These projects also have a higher incidence of staffing and budget problems.

This and further evidence presented earlier suggests that the postponement of M&I may be a problem for the small proportion of the portfolio which is in the very worst condition and requires the highest level of repairs and replacements. Furthermore, a definite link between postponement of M&I because of lack of budget and project size was identified.

With respect to the management of condition, project managers showed a propensity to rate the condition of their projects higher than the ratings provided by CMHC inspectors. Projects may therefore be maintained at a lower level than they should be.

Unit preparation time was found to decrease as turnover increased. With less than 0.5 per cent of unit months lost to unit preparation, unit preparation times are not a major management problem.

There is some form of tenant involvement in most public housing projects but it is not formalized through tenant committees. Only a minority of projects, 13.7 per cent, have no form of tenant involvement at all. The majority of public housing projects have some form of tenant involvement in the maintenance of grounds and common areas, social or recreational programs, protection against vandalism and project security.

Although meetings between project staff and tenants occur in almost 40 per cent of projects, meetings between project staff and tenant committees occur in only 15.9 per cent of projects. This indicates that, although some form of tenant involvement exists in the majority of projects, this involvement is not usually organized through a tenant committee structure. Meetings are more common in seniors projects and in larger public housing projects.

Project managers are open to advice from tenants and to the formation of tenant committees. The support of project managers for direct tenant involvement in the management of projects is much lower. Managers in 75 per cent of projects agreed they should pay close attention to the advice of individual tenants. Furthermore, managers in over 60 per cent of projects agreed that tenant organizations should exist to provide advice and suggestions to the project management team.

Managers in close to half of public housing projects agreed that tenants should have no role in the management of their project. The opposition of project managers increase if major tenant involvement is considered. Managers in close to 80 per cent of projects disagreed with the statement that tenants should play a major role in the management of their project.

Project management provides support for tenant meetings in just over one-quarter of public housing projects. Support (i.e. meeting spaces and materials) for tenant meetings is provided by management in over one-quarter of public housing projects, including over half of public housing units. Support for tenant meetings is more common in seniors projects and in larger public housing projects.

Project managers assessed that meeting rooms were satisfactory in just over half of public housing projects, including close to 70 per cent of all public housing units. Meeting rooms are not satisfactory in 7.0 per cent of projects, including 8.8 per cent of all units, or simply not available in 38.7 per cent of projects, including 21.5 per cent of units. Meeting rooms are more available in seniors projects and in larger projects.

More than 80 per cent of tenants are satisfied with the way their project is run. Tenants were most dissatisfied with the performance of management with regard to security and the speed in handling requests. Families also expressed greater dissastisfaction than did seniors.

Tenant satisfaction does not vary by their level of involvement, but tenants want a greater role in the running of their project. No causal relationship can be established between level of involvement and satisfaction with project management as it remains unclear whether tenant dissatisfaction with project management leads to involvement or whether involvement itself is a source of dissatisfaction.

Irrespective of their current level of involvement, approximately one third of tenants are in favour of greater tenant involvement in the management of their project. The majority of decided tenants want more involvement, but over one-third of surveyed tenants did not express an opinion.

B. Provincial and Territorial Support to Project Management

Although CMHC is a major financial contributor to public housing in Canada, it does not manage the public housing portfolio, and has instituted very few controls over its management. Through the federal, provincial and territorial agreements, responsibility for the management of the public housing portfolio in Canada is vested almost exclusively with the provinces and territories. The Public Housing Programs have evolved from the federal/provincial/territorial operating agreements. These agreements were initially developed for the delivery of new housing and include very few references to how the public housing portfolio should be managed. As a result each provincial and territorial management program has evolved differently.

The analysis of management practices and performance was based on data collected from four sources: 1) provincial and territorial program operations guidelines or manuals (where available); 2) discussions with provincial and territorial representatives; 3) the survey of public housing project managers; and 4) the survey of public housing tenants.

Because of the provincial and territorial variations in the size and other characteristics of the stock, it is not assumed that one management structure is appropriate for all provinces and territories. The structure of management organization in the provinces and territories follows two basic models. The local housing authority model, has day-to-day management responsibility decentralized to the local housing authority level. Within this decentralized management structure, the provinces have varying degrees of influence over the activities of the local housing authorities. An alternative approach involves direct management of the units by the province. In these cases project managers either do not exist (Newfoundland and New Brunswick) or they report directly to the staff at regional or head office (British Columbia and seniors projects in Prince Edward Island).

Decentralization has advantages and disadvantages. With decentralized authority, guidelines or policies are necessary to effect consistent decision making with regard to tenant issues and the physical and financial management of the stock. Further, the physical dispersal of the program to communities within the provinces makes the communication of these policies and guidelines difficult. The advantages of decentralization are project-level decision-making capability which improve response times and responsiveness to local conditions.

Various forms of direction and support can be used by higher levels of authority to enhance the consistency with which policy is applied and to enhance the skills and knowledge of the people managing and maintaining the program at the local level.

Support to lower levels of the organization may consist of written information (policies and guidelines), training, orientation, meetings for communication and feedback, and access to more specialized and experienced staff.

The evaluation examined provincial and territorial support of the management of the portfolio in six specific areas: support given to project level management, approaches to tenant/project staff interaction, levels of accreditation and training of project management, management of unit condition, management of project condition, and overall management planning for operational efficiency and effectiveness.

Provinces and territories provided local housing authorities with sound program manuals and training/communication programs. All provinces and territories had program manuals, although most were lacking in one area or another (i.e. tenant relations, maintenance). Training was encouraged, with funding assistance being provided or internal programs offered in most provinces and territories. Similarly, in most provinces and territories staff support was available at the regional or provincial/territorial levels. Maintenance guidelines were found to be one area of weakness in provincial and territorial support, principally because maintenance guidelines were incomplete or because they did not include follow-up monitoring.

Provincial or territorial support for tenant/project management interaction was generally found to be strong. Where portfolio or project size warrants, projects have on-site offices and community resource workers. Involvement of tenants on boards and associations, and day-to-day or regular contact with tenants is also strong. Tenant involvement in committee work varies greatly but for the most part focuses on security or social related activities.

Very few provinces and territories have project managers with property management accreditation either complete or in progress. However, project managers in most provinces and territories have pursued courses in budget planning, tenant relations, property inspections or trades.

An examination of the management of unit condition found that most provinces did not have adequate guidelines governing unit inspections and tenancy checks. Similarly, many provinces and territories did not have adequate means of permitting tenants to contact project staff. In most cases project managers controlled maintenance budgets at the project level allowing for greater responsiveness to tenant requests.

Most provinces and territories had three to five year modernization and improvement (M&I) plans to assist in managing project condition. However, very few provinces and territories encourage the reporting of repair costs to promote preventive maintenance or monitor maintenance practices. Employee reports at the project level are used by most project managers to prioritize M&I.

Strong relationships were identified between three key composite indicators of management performance and project condition: the level of accreditation and training of project managers, the management of unit condition, and the presence of management planning.

These results show that there are efforts to be made at both the provincial/territorial and project level which will have a positive effect on management of the program. Although few manage the stock directly, the provinces and territories can effect a great deal of change by recommending procedures to project level staff, increasing their monitoring of the program and providing more training and other forms of support to project level management. Provinces and territories also have the ability to formulate policy on such issues as tenant participation in project management.

VI PROGRAM COSTS

Few explicit cost control guidelines exist for the operating phase, a reflection of the fact that responsibility for day-to-day administration was vested with provincial and territorial housing agencies. To limit excessive administrative overhead, administrative expenses have been limited to six per cent of total operating costs for the portfolio. Guidelines also place limits on the amount of expenditures which may be made on modernization and improvements without obtaining the approval of CMHC. Prior to mid-1989, the review thresholds for modernization and improvement expenditures were $100,000 per project or $1,000 per unit. In July 1989, this review limit was increased to $250,000 per project and $10,000 per unit with the exception of projects which are less than five years old, where the $1,000 per unit limit was retained. In cases where the estimated costs of proposed M&I work exceeds these guidelines, CMHC concurrence is to be obtained prior to its inclusion in the budget.

An administrative expense data base was prepared specifically for the evaluation. The information contained in this data base represents "actual" costs as opposed to "adjusted" costs. For example, where administrative costs have been adjusted to meet the 6 per cent guideline the actual rather than adjusted costs were recovered in the data base.

Expenditures averaged $5,545 per unit in 1986. With revenues of approximately $2,450 per unit recovering just under one-half (44.2 per cent) of total expenditures, an average operating loss of $3,098 per unit was recorded. Approximately 54.8 per cent of operating losses for the combined Section 79 and Section 81/82 portfolios are covered by federal subsidies, with the remainder being contributed by provincial and municipal governments (42.1 per cent and 3.1 per cent, respectively). The average annual federal subsidy for each unit of public housing supported by the program was $1,698 in 1986.

The largest single budget component by far is amortization expenses, which accounted for over one-third (37.2 per cent) of total expenditures in 1986. Municipal taxes account for a further 14.0 per cent of total expenditures. Together, amortization and taxes constitute over one-half (51.2 per cent) of the total expenditures on the public housing portfolio in 1986. After amortization and taxes, the remaining expenditures are allocated among project operations (14.4 per cent), utilities (13.0 per cent), maintenance (7.4 per cent), modernization and improvement (8.3 per cent) and administrative costs (5.8 per cent).

Real operating losses per unit declined over the course of the 1979-86 period. After accounting for inflation (using the housing component of the Consumer Price Index), real operating losses per unit were 14.5 per cent lower in 1986 than they were in 1979 (Table 32). This decline in operating losses is principally the result of a marked increase in real revenues per unit (19.0 per cent), as well as a 2.5 per cent reduction in operating expenditures per unit. With revenues increasing at a faster pace than expenditures, the rate of cost recovery has steadily increased over the course of the 1979-86 period, from 38.8 per cent in 1979 to 48.6 per cent in 1986.

TABLE 32
AVERAGE ANNUAL EXPENDITURES, REVENUES AND OPERATING LOSSES PER UNIT, 1979-1986 (CONSTANT $1986)

	EXPENDITURES		REVENUES		OPERATING LOSSES	
YEAR	AVERAGE PER UNIT	PER CENT CHANGE	AVERAGE PER UNIT	PER CENT CHANGE	AVERAGE PER UNIT	PER CENT CHANGE
1979	5,685	-	2,076	-	3,623	-
1980	5,658	-0.5	2,060	-0.8	3,631	+0.2
1981	5,620	-0.7	2,080	+1.0	3,567	-1.8
1982	5,498	-2.2	2,103	+1.1	3,419	-4.1
1983	5,380	-2.1	2,119	+0.8	3,265	-4.5
1984	5,584	+3.8	2,264	+6.8	3,322	+1.7
1985	5,592	+0.1	2,344	+3.5	3,252	-2.1
1986	5,545	-0.8	2,450	+4.5	3,098	-4.7

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Project level operating data for Newfoundland and the Northwest Territories not included for 1986.

Strictly comparing expenditures in 1986 to those recorded for 1979 yields the following observations. Average expenditures per unit declined in six of the seven budget categories: project operations (-20.0 per cent), amortization (-16.0 per cent), maintenance (-11.9 per cent), taxes (-4.6 per cent), administration (-5.3 per cent) and utilities (-1.5 per cent) (Table 33). Modernization and improvements was the only budget category which recorded increased expenditures per unit in real terms (+153.0 per cent).

The evaluation also examined the variation in operating costs across different components of the portfolio to determine which components of the portfolio are more expensive to operate. In order to avoid the influence of unusually high expenditures in any given year, costs were averaged over the

TABLE 33
AVERAGE ANNUAL OPERATING EXPENDITURES PER UNIT, 1979-1986
CONSTANT $1986

BUDGET CATEGORIES	1979	1980	1981	1982	1983	1984	1985	1986
Taxes	818	795	775	763	725	751	756	780
Utilities	732	762	800	801	790	826	799	721
Operating	993	980	950	923	676	717	746	794
Maintenance	464	537	348	404	375	402	418	409
M&I	181	131	391	249	287	339	396	458
Amortization	2,474	2,451	2,358	2,251	2,282	2,310	2,205	2,078
Administration	339	339	342	345	309	310	319	321

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Project level operating data for Newfoundland and the Northwest Territories not included for 1986.

eight year period spanning 1979-86. Expenditures for the years 1979-85 were first inflated to 1986 values, using the housing component of the Consumer Price Index. Subsequent to this, an average of the annual expenditures recorded between 1979 and 1986 was calculated (Table 34).

A comparison of public housing operating costs among provinces and territories reveals that average annual expenditures per unit were highest in Northwest Territories ($16,168), followed by Yukon ($8,949), Newfoundland ($6,763) and Alberta ($6,452). Average expenditures per unit were lowest in Manitoba ($4 930), Saskatchewan ($4,977), Nova Scotia ($5,228) and Quebec ($5,293). Average expenditures in the remaining provinces and territories ranged from $5,349 to $5,885 per unit.

A variety of factors contribute to provincial and territorial variations in operating expenditures per unit. Differences in accessibility influence the costs of key inputs to both the construction and operation of the portfolio, whether they be construction materials, labour, or fuel, electricity and water. Differences in climate affect the consumption of fuel and electricity to heat and operate public housing projects. The approach to portfolio management also differs by province and territory. Provincial and territorial policies may also indirectly influence trends in operating expenditures. For example, an emphasis on housing seniors as opposed to families may result in lower overall operating costs per unit in provincial or territorial portfolios.

TABLE 34
AVERAGE ANNUAL EXPENDITURES, REVENUES AND OPERATING LOSSES PER UNIT, 1979-1986 (MEASURED IN $1986)

PROJECT CHARACTERISTICS	EXPENDITURES PER UNIT	REVENUES PER UNIT	LOSSES PER UNIT
PROGRAM			
Section 79	5,378	2,259	3,183
Section 81/82	5,608	2,174	3,435
PROVINCE/TERRITORY			
Newfoundland	6,763	1,668	5,098
Prince Edward Island	5,852	2,074	3,806
Nova Scotia	5,228	2,070	3,166
New Brunswick	5,885	2,039	3,845
Quebec	5,293	2,056	3,238
Ontario	5,481	2,188	3,293
Manitoba	4,930	2,272	2,659
Saskatchewan	4,977	1,929	3,088
Alberta	6,452	2,276	4,176
British Columbia	5,349	3,391	2,174
Yukon	8,949	3,140	5,808
Northwest Territories	16,168	1,549	14,620
CLIENT			
Family	6,448	2,341	4,113
Senior	4,822	2,027	2,804
Family & Senior	5,185	2,365	2,883
PROJECT AGE			
Pre - 1964	5,311	2,391	2,990
1964 - 1969	5,875	2,399	3,493
1970 - 1974	4,905	2,161	2,754
1975 - 1979	5,768	2,138	3,633
1980 - 1987	7,544	2,078	5,485
BUILDING TYPE			
Detached, Semi & Row	6,492	2,303	4,203
Low rise	5,079	2,050	3,038
High rise	5,079	2,091	2,994
Mixed (no high rise)	5,721	2,476	3,313
Mixed (with high rise)	6,042	2,346	3,710
ALL	5,567	2,190	3,389

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Average annual expenditures, revenues and operating losses per unit for the 1979-86 period are reported in 1986 dollars.

In addition to the influence exerted by differences in the cost of key inputs (e.g. materials, labour, utilities) and approaches to portfolio management, provincial and territorial variations in operating expenditures are also strongly influenced by underlying differences in the characteristics of their respective public housing portfolios. In particular, the age of the portfolio and the nature of the clients served strongly influence the cost of operating public housing projects.

Family projects are more costly to operate than seniors projects. Total operating expenditures per unit were 36 per cent higher for family projects than for seniors projects. These differences were most marked in the case of maintenance (+143 per cent) and modernization and improvements (+144 per cent). Part of the difference in operating costs per unit between family and seniors projects is likely due to the difference in unit sizes.

The cost of operating public housing projects also varies according to the age of the project. In terms of total expenditures, the newest projects are the most expensive to operate. This is due to the higher amortization costs incurred among this component of the portfolio. Per unit expenditures on maintenance, modernization and improvements and project operations all increase with the age of the project.

Among building types, the highest expenditures per unit are exhibited by projects consisting of detached, semi-detached, and row structures. Apartment projects are less costly to operate in every budget category with the exception of taxes and project operations (in the case of high-rise projects) and amortization (in the case of low-rise projects). Projects containing a mixture of building types recorded slightly higher than average expenditures per unit. Per unit expenditures on amortization, utilities and maintenance decline with increasing project size. In contrast, expenditures on taxes, operations and modernization and improvements all increase with project size.

As was the case with projects consisting of detached, semi-detached and row units and those with under 10 units, public housing projects located in rural areas also manifested higher than average operating expenditures per unit. The commonality among the factors contributing to high overall expenditures among these projects is not surprising, given the considerable similarities among the projects themselves. In fact, 83.1 per cent of all projects with under 10 units and 53.5 per cent of all projects in rural areas are composed of detached, semi-detached and row structures.

VII KEY FINDINGS AND IMPLICATIONS FOR PUBLIC HOUSING IN CANADA

This chapter summarizes the main findings and conclusions of the evaluation, assesses the implications for public housing in Canada and identifies a variety of actions that could enhance the management of the program in the future. The chapter is organized into four sections which cover the characteristics of the stock and the characteristics of public housing clients; the physical condition of the stock; the quality of life in public housing; and, the management of the Public Housing Program.

The first section on the characteristics of the stock and the characteristics of public housing clients provides background information on the program. Subsequent sections specifically address the objectives of the Public Housing Program:

OBJECTIVE	**SECTION**
"adequate housing/ decent/safe housing"	o the physical condition of the stock
"decent/safe housing" "provide accommodation which most effectively integrates public housing occupants into the community"	o the quality of life in public housing
"efficient and effective manner" "reasonable costs to the government involved" "individuals and families of low income "within their financial capabilities at rents they can afford"	o the **management** of the program

CHARACTERISTICS OF THE STOCK

The public housing portfolio is diverse in character.

Public housing has been developed in every Canadian province and territory and in communities of all sizes, including rural areas. Projects are comprised of a variety of building types, ranging from single family detached homes to large high-rise buildings. Individual projects range in size from 1 to 1,395 units.

Most public housing units are less than twenty years old.

Although federal financial assistance for the development and operation of public housing projects has been available for almost forty years, the majority of the stock is of considerably more recent origin. Fully 87.2 per cent of all public housing units are less than twenty years old.

The Public Housing Program serves two distinct client groups (families and senior citizens) which differ greatly in their characteristics and their needs.

Single parent families account for one-half of all households residing in family projects. Over half (57.9 per cent) of residents of family public housing projects are under the age of 25; 37.5 per cent are children under the age of 15. Just over one-third of family clients are employed. Provincial or municipal social assistance is the major source of income for one-half of family clients.

Over four-fifths of all residents of seniors projects are aged 65 years or older; 34.1 per cent are at least 75 years of age. One-fifth of seniors households have one or more members who are disabled or infirm. Almost all seniors clients are single person households (85.4 per cent) and are retired or are unable to work due to disability (92.3 per cent). Approximately 60 per cent of seniors clients rely on Old Age Security and the Guaranteed Income Supplement as their principal source of income.

Roughly equal numbers of family and seniors households are served by the Public Housing Program. Overall, only one-quarter of all clients are in the labour force (either employed or unemployed but looking for work). Average household incomes for public housing residents were $10,632 in 1988, only 40 per cent of the average income of renter households in general.

The diversity of the stock (in terms of location, project size, building type and project age) and the characteristics of public housing clients, pose a range of management challenges for preserving the stock and responding to client needs in a cost-effective and efficient manner.

PHYSICAL CONDITION OF THE STOCK

For the first time, the 1988 Physical Condition Survey provides a detailed, accurate and comprehensive assessment of the condition of Canada's public housing stock.

The public housing stock is in good condition overall.

Whether using units, buildings, sites or projects as the unit of analysis, at least 94 per cent of the total portfolio meets or exceeds Minimum Property Standards. Although the stock is generally in good condition, it is estimated that 169 projects (3.5 per cent), 1,400 buildings (6.0 per cent) and 8,200 units (4.0 per cent) fail to meet Minimum Property Standards. In addition, more than half of all projects only minimally meet Minimum Property Standards and are at risk of falling below the standards.

Although the public housing stock is in good condition overall, repair and replacement actions valued at $350 million are required.

As part of the Physical Condition Survey, CMHC inspectors recommended repair and replacement actions valued at an estimated $350 million for the public housing portfolio nationwide. In most cases, repair and replacement costs are fairly modest. Over one-third of all projects (37.8 per cent) require actions costing less than $5,000, while almost one-half (47.6 per cent) require less than $10,000.

Measured on a per unit basis, the average repair cost is $1,693. Almost half of all projects (47.0 per cent) required repair and replacement costs of less than $500 per unit.

A minority of projects in very poor condition require the majority of repair and replacement costs

Measured on a cost per project basis, the 2.8 per cent of projects (containing 15.4 per cent of all units) which require $500,000 or more for repairs and replacements account for over half of all repair and replacement costs.

Measured on a cost per unit basis, the 6.9 per cent of projects (containing 7.5 per cent of all units) which require $5,000 or more per unit for repairs and replacements account for 44 per cent of all repair and replacement costs.

Physical condition is not uniform across all components of the portfolio.

Generally speaking, projects committed prior to 1970, those serving family clients and those containing a mixture of building types are in the poorest condition.

Costs of additions and upgrades to the public housing stock are estimated at $133 million.

As part of the Physical Condition Survey, CMHC inspectors collected information on the need for additions and upgrades to the public housing stock in the areas of fire safety, lighting, ventilation, energy efficiency and durability/maintenance. These additions and upgrades are either necessary to meet current code requirements or would result in major cost savings.

There exists a backlog in funding of needed repairs, replacements, additions and upgrades in the public housing stock.

Assuming that the 1988 maintenance and M&I budgets for the program, totalling $274 million, are appropriately allocated to public housing projects according to levels of need, a funding backlog in the order of $209 million exists.

The level of the estimated backlog should be treated with caution

It is difficult with the data available to establish whether the backlog has increased or decreased in recent years. Increased attention on the preservation of the existing stock and increasing maintenance and modernization and improvement expenditures through the 1980's, suggest that the level of the backlog could be decreasing.

A continued increase in maintenance and M&I levels in future years could accommodate the annual accrual of "new" repairs, replacements, additions and upgrades as well as the backlog identified.

Under the assumption that increasing maintenance and M&I expenditures have helped diminish the level of the backlog in recent years, a continued increase in maintenance and M&I levels could help decrease the level of the backlog. This observation should be tempered by the fact that the level of "new" annual accrual of need is likely to increase with the aging of the stock.

There is evidence that projects which are in the worst condition have not received their fair share of maintenance and M&I funding.

Projects failing the NHA Minimum Property Standards had the highest incidence of postponement of maintenance because of a lack of budget. Furthermore, projects which require $5,000 or more per unit for repairs and replacements had the highest incidence of postponed maintenance and M&I because of a lack of budget.

Maintenance activities appear to have been increased in some projects to make up for a shortage of M&I expenditures.

Although the level of postponed maintenance because of lack of budget decreases in projects where more funds are available for maintenance, the incidence of postponed M&I because of lack of budget increases steadily as maintenance expenditures per unit increase.

The change in the age profile of the public housing stock over the next fifteen years will have an impact on project condition

In 1988, the average age of the stock was 14 years. By the year 2003, all 4,801 projects will be older than 15 years and over 60 per cent of projects will be over 25 years old. Given the present condition profile of the stock, the aging of the portfolio will have a negative impact on its physical condition.

The potential for increased deterioration of the stock presents an opportunity to improve the management of physical condition. Specifically, the focus should not be just on those projects which currently exhibit major repair and replacement requirements, but it should also be on preventing other parts of the portfolio from deteriorating to a similar condition. In particular, projects which only minimally meet Minimum Property Standards and are at risk of falling below the standards should be targeted for attention.

Periodic monitoring of the overall condition of the public housing portfolio should be instituted. This should become a normal component of enhanced portfolio management practices and would enable a better allocation of maintenance and M&I resources. Periodic monitoring of condition would also provide time-series data which are needed to indicate clearly whether the condition of the stock is improving or deteriorating.

There is a need for redesign and redevelopment (modification/regeneration) of a small portion of the public housing portfolio.

The evaluation estimated that up to 500 projects which either fail or just meet NHA Minimum Property Standards (10.5 per cent of the portfolio) were candidates for some form of redesign and redevelopment. Among this group, about 57 projects (1.2 per cent of the total portfolio) do not meet NHA Minimum Property Standards for Existing Residential Buildings. Although regeneration activities are not necessarily restricted to projects in poor condition, regeneration efforts to this date have been in projects which were in poor physical condition. These 57 projects are therefore the most likely candidates for redesign and redevelopment and constitute a lower-bound estimate.

Although estimating redesign and redevelopment costs is difficult, the evaluation provides a lower-bound estimate of $133 million (for 57 projects), and an upper-bound estimate of $289 million (for 500 projects). These estimates recognize that redesign and redevelopment needs are more serious in projects which fail the NHA Minimum Property Standards.

The level of time and staff resources necessary in previous regeneration efforts indicate that any future regeneration efforts would have to be phased over several years. The cost estimates for redesign and redevelopment are therefore not included in the estimate of the backlog of repairs and replacements, additions and upgrades.

A separate modification (regeneration) initiative should be established to address the needs of projects which are beyond normal maintenance and M&I.

At present, there is little data for identifying the individual projects which are candidates for modification at the national level.

The identification and monitoring of potential candidate projects for modification (regeneration) should be an integral part of the periodic review and monitoring of the overall condition of the public housing portfolio.

The case studies illustrated that public housing projects which are candidates for modification often experience complex physical and/or social problems.

A modification (regeneration) program should involve sound planning and a multi-disciplinary team of experts to investigate all the evident problems within the projects and all the solutions that might apply, without a predisposition to recommending physical changes. The use of experts with experience in previous modification projects would also ensure that lessons learned are transferable.

Tenant support and involvement is critical to successful modification (regeneration) of public housing projects.

Both the case studies and past regeneration efforts indicate that any major physical modification to a project or its social environment would be hard to achieve without tenant support. Tenants living in an environment where they are alienated may resist supporting or co-operating with a redesign or redevelopment team.

Active participation of the tenants and other government bodies serving the tenant population is essential to the achievement of modification (regeneration) goals.

QUALITY OF LIFE IN PUBLIC HOUSING

Clients have improved their living conditions as a result of the move to their current public housing unit.

Most public housing residents had previously been housed in either the private rental market (45.0 per cent) or the private ownership market (23.3 per cent). Approximately one-fifth of tenants moved to their current unit from a different public housing project or another unit in the same project. High rental costs (57.1 per cent), inadequate dwelling size (44.4 per cent) and poor dwelling condition (35.4 per cent) were the most commonly reported reasons for moving to public housing. Over 60 per cent of clients were housed within six months of application, while 78 per cent were housed within one year of application.

In comparing their current housing unit to the one they occupied previously, the majority of respondents cited improvements in rental costs (67.1 per cent), dwelling size (64.3 per cent), state of repair (56.6 per cent) and privacy/independence (53.0 per cent). These are the areas which most closely conform to formal program objectives (affordable, suitable and adequate housing). The Public Housing Program has also been successful in terms of providing housing which maintains or improves access to facilities and services and to clients' established social networks (friends and family).

While the Public Housing Program has been successful in improving the housing conditions of its clients, it has been less successful in providing safe environments.

When comparing their current dwelling to the one they occupied previously, almost one-quarter of survey respondents reported worse conditions with respect to crime and vandalism, only slightly less than the proportion citing improvements (30.9 per cent). Among family projects, a greater proportion cited worse crime and vandalism conditions (35.6 per cent) than did improvements (21.6 per cent).

Public housing clients are satisfied with their homes.

87.3 per cent of public housing residents expressed overall satisfaction with their home, compared to 76.8 per cent recorded by a survey of renter households in general.

Public housing tenants expressed some dissatisfaction over the way projects are run (19.4 per cent). When individual aspects of project management are examined, security emerges as a major concern, with 26.2 per cent of clients dissatisfied. Dissatisfaction with project security was particularly prevalent among residents of family projects (41.9 per cent). Clients also expressed a similar degree of dissatisfaction with the speed with which their requests were addressed by project staff (25.2 per cent dissatisfied overall; 38.2 per cent dissatisfied in family projects).

Crime is viewed by residents to be a significant problem in family public housing projects.

Property related crimes (e.g. vandalism and property theft) are the most pervasive problems. Vandalism and drug dealing were each reported to be major problems by just over one-third of family clients. Property theft and assault were reported to be major problems by one-quarter and one-fifth of family clients, respectively. While the majority of projects do not appear to have major problems with drug dealing, the case studies underscore the severe social stress that projects undergo when drug trafficking becomes firmly established. In complete contrast, major problems with crime reported by residents of senior citizen projects were very isolated.

The emergence of security as a major concern of tenants is a reflection of the problems with crime in family public housing projects. The overall security and safety of residents are threatened in a portion of the family public housing portfolio, to the detriment of the young families and youth who reside in them. Resolving problems of security deserve as much attention as issues related to the condition of the stock.

Problems with crime do not appear to be a feature of public housing per se, but rather are reflective of the dynamics of crime prevailing in the community at large (e.g. related to low-incomes, large cities, etc.).

The incidence of major problems with vandalism in family public housing projects (as revealed in residents' perceptions) were generally similar to those recorded by renters and low-income households in general with respect to their areas of residence. However, the incidence of major problems with property theft, assault and drug dealing reported by family clients were lower than those recorded among renters and low-income households generally. Major problems with crime reported by residents of senior citizen projects were much lower than those reported by senior citizens in the population at large.

MANAGEMENT OF PUBLIC HOUSING

Responsibilities for the day-to-day management of the portfolio are highly decentralized.

While the day-to-day management of the public housing portfolio is the responsibility of Provincial and Territorial housing agencies, in most cases these duties have been delegated to Local Housing Authorities. In provinces which retain these responsibilities, the activities are often performed through regional offices. Nationally, there are approximately 1,100 Local Housing Authorities, private organizations and provincial or territorial offices which perform this function. The portfolios managed by individual management groups range in size from 2 units to 29,151 units. If the number of local public housing management groups is any indication, operational management is most decentralized in Quebec, Alberta and Saskatchewan.

Provincial and territorial property management programs have evolved differently. Provincial and territorial support for project level management can be improved in certain areas.

The differences in provincial and territorial management are associated with characteristics such as portfolio size, centralized or decentralized management, dominant client type and portfolio age.

Several provinces and territories did not have adequate management control in the six areas selected as key indicators of management performance. Three of these areas, accreditation and training of project managers, the management of unit condition and management planning, were found to be strongly related to the physical condition of the public housing stock.

However, the emergence of the preservation of the public housing stock as a high priority seems to have resulted in increased attention to strengthening provincial and territorial support for project level management.

Since day-to-day administration of the portfolio rests with the provinces and territories, CMHC has not played an active role in the management of the stock.

Federal objectives for the program, originally developed for the delivery of new units, do not reflect the current project and property management thrust of the program. Similarly, federal guidelines and procedures for a property management program do not exist. Some guidelines to control expenditures, such as maximum financial exposure for maintenance and M&I, do exist. Prior to the evaluation, information to assist in the monitoring and management of the program was only available in manual form.

CMHC should play a more active role in the management of the stock by guiding the evolution of the program and by monitoring its performance.

Federal Public Housing Program objectives should be updated to reflect the property management orientation of the program. In addition, previous activity-oriented objectives should be replaced with results-oriented objectives.

Performance measures should be developed to establish program goals and monitoring standards to allow all parties to assess risks and management effectiveness.

Cost control mechanisms appropriate for an aging portfolio should be developed (Modernization and Improvement Authorities were reviewed by CMHC in 1989).

Monitoring requires the availability of automated (current and time series) information. These data would include basic characteristics of the stock and tenants, and administrative expenditure patterns. A second level of information would include the monitoring of physical condition and of the management and social environments.

Projects requiring the greatest attention or in the greatest need do not appear to receive the greatest attention.

A range of indicators throughout the evaluation have documented the fact that projects identified as being in greater need (e.g. older projects, family projects) have received less attention in relative terms.

The percentage of projects with postponed maintenance (where budget was a problem) was highest in the older projects, in family projects, and in projects that failed the physical condition survey.

The majority of project managers are responsible for portfolios of less than 100 public and social housing units. However, managers of older family projects, which had a higher incidence of poor condition, are responsible for larger portfolios.

The level of staff resources per 100 units was also lower for older projects, larger projects as well as projects with high-rise buildings or a mix of building types. Although economies of scale may be associated with larger high-rise projects, it is questionable whether the savings are sufficiently large to account for their having lower staffing levels than for smaller projects or projects composed of detached, semi-detached or row housing.

Within a given budget and recognizing that each project requires a certain annual investment, maintenance and M&I budgets should be allocated according to need in property management programs with those projects and units in greatest need receiving a share of the budget in proportion to that need.

Project managers have a high degree of experience.

Project managers have considerable experience with an average of over six years as project manager, and most managers emerge through the program. Only one-tenth of managers are Certified Property Managers (CPM) or have received other designation or accreditation. Ontario, Manitoba, Saskatchewan and British Columbia account for almost all accredited managers.

Not all project managers can accurately assess the physical condition of their projects.

When project manager and inspector ratings of project condition are matched and compared, 37 per cent of project managers give their project a higher rating than the inspector, 52 per cent give it the same rating and 11 per cent give their project a lower rating than the inspector.

Project managers could benefit from additional training in property management. Project managers could particularly benefit from further training in the area of standards of condition and the assessment of the physical condition of projects.

There is some form of tenant involvement in most public housing projects but it is not formalized through tenant committees

Only a minority of projects, 13.7 per cent, have no form of tenant involvement at all. The majority of public housing projects have some form of tenant involvement in the maintenance of grounds and common areas, social or recreational programs, protection against vandalism and project security. Tenant involvement in office support and budgeting is much lower with only 10 per cent of projects reporting some form of involvement in this area.

Although meetings between project staff and tenants occur in almost 40 per cent of projects, meetings between project staff and formal tenant committees occur in only 15.9 per cent of projects. This indicates that, although some form of tenant involvement exists in the majority of projects, this involvement is not usually organized through a tenant committee structure. Meetings are more common in seniors projects and in larger public housing projects.

Project managers are open to advice from tenants and to the formation of tenant committees. The support of project managers for direct tenant involvement in the management of projects is much lower.

Managers in 75 per cent of projects agreed they should pay close attention to the advice of individual tenants. Furthermore, managers in over 60 per cent of projects agreed that tenant organizations should exist to provide advice and suggestions to the project management team.

Managers in close to half of public housing projects agreed that tenants should have no role in the management of their project. The opposition of project managers is greater when major tenant involvement is considered. Managers in almost 80 per cent of projects disagreed with the statement that tenants should play a major role in the management of their project.

Project management provides support for tenant meetings in just over one-quarter of public housing projects

Support (i.e. meeting spaces, materials) for tenant meetings is provided by management in over one-quarter of public housing projects, including over half of all public housing units. Support for tenant meetings is more common in seniors projects and in larger public housing projects.

Meeting rooms are available and satisfactory in approximately half of public housing projects.

Project managers assessed that meeting rooms were satisfactory in just over half of public housing projects, including almost 70 per cent of all public housing units. Meeting rooms are not satisfactory in 7.0 per cent of projects, including 8.8 per cent of all units, or simply not available in 38.7 per cent of projects, including 21.5 per cent of units. Meeting rooms are more available in seniors projects and in larger projects.

Tenants are generally satisfied with the way their projects are run.

More than 80 per cent of tenants are satisfied with the way their project is run overall. However, tenants are less satisfied with some aspects of project management than others. In particular, tenants expressed their greatest dissatisfaction with the performance of management with regard to security and the speed with which requests are handled. Families were less satisfied with project management than were seniors.

Tenant satisfaction does not vary by their level of involvement, but tenants want a greater role in the running of their project.

No causal relationship can be established between level of involvement and satisfaction with project management as it remains unclear whether tenant dissatisfaction with project management leads to involvement.

Irrespective of their current level of involvement, approximately one-third of tenants are in favour of greater tenant involvement in the management of their project. The majority of decided tenants want more involvement, but over one-third of surveyed tenants did not express an opinion.

The feasibility of promoting greater tenant input and involvement in the management of public housing projects should be further explored. At the same time, support and training should be provided for project managers to deal with the resulting changes in the management environment of public housing.

Not all public housing units are utilized.

Over 6 per cent of units were vacant for one month or more during the year preceding the survey. This represents a lost capacity of over 1,000 units per annum. The most common reasons for long-term vacancies were lack of need, physical condition and unit suitability. Vacancy rates were higher in rural areas, where underutilization is predominantly characterized by low need for public housing units. Projects with unsatisfactory facilities and services and those located near derelict or dangerous buildings had higher than average vacancy rates.

The underutilization of projects, particularly in rural areas, indicates the importance of accurately assessing the need and demand for social housing units. Need and demand analyses for new social housing delivery and existing projects should be strengthened, including the monitoring of vacancy rates in existing projects.

Concerning vacancies associated with tenant turnover, almost 77 per cent of units were ready for occupancy within 14 days of tenant departure.

Tenant turnover has been handled very effectively in most projects, resulting in a low loss of occupancy months to the portfolio; however, there is still a portion of the portfolio where tenant turnover procedures could improve.

The physical conversion of units is costly.

Conversions were found to be a costly solution to the problem of under-utilized stock. Conversions could also result in a net decrease in the total number of units because many requested conversions are from small to larger units. Although units identified for conversion are considered to be less desirable by tenants, vacancy rates for these units are still low and units are generally in good condition. Based on case study analyses, the estimated cost of conversion from a bachelor to a one bedroom unit is about $20,000.

Non-physical options such as a change in client (e.g. non-elderly singles in bachelor units) or a change in use (e.g. nursing facility in bachelor unit) should be considered prior to physical conversion.

Total expenditures under the program in 1986 exceeded $1 billion.

Total expenditures under the program in 1986 exceeded $1 billion ($5,545 per unit). Revenues of almost $500 million ($2,450 per unit) resulted in operating losses of about $600 million ($3,098 per unit) in 1986. The CMHC share of this operating loss was $329 million ($1,698 per unit).

Only a small portion of current program expenditures are for repairing and upgrading the stock. Amortization and taxes currently consume approximately one-half of total annual expenditures on the portfolio.

Over 37 per cent of total expenditures are for amortization ($2,078 per unit). Taxes ($780 per unit), utilities ($721 per unit) and administration ($321 per unit) consume an additional 33 per cent of all expenditures leaving less than one-third of total expenditures for operations ($794 per unit), maintenance ($409 per unit) and M&I ($458 per unit).

As mortgages reach the end of their amortization term, the proportion of project budgets consumed by principal and interest payments will decline. The impact of mortgage termination will not begin to be felt for 20 to 30 years, however.

As individual mortgages reach the end of their amortization period and are paid in full, the proportion of total operating expenditures required for amortization will begin to decline. The majority of amortization terms were set at 50 years in duration. Consequently, the impact of mortgage termination will not begin to be felt with any magnitude for 20 to 30 years. Mortgages for approximately 12 per cent of all projects will be paid in full by the year 2019; mortgages for two-thirds of all projects will be paid in full by the year 2029.

The Public Housing Program is well targeted to low-income households.

The program is well targeted to low-income households, with 96.1 per cent of clients reporting household incomes below the appropriate "core need income threshold" for the area in which they live.

Although the program is well targeted, just under 40 per cent of public housing tenants continue to be in core need.

Despite the assistance provided through the Public Housing Program, 39.9 per cent of households surveyed remain in core need. Approximately two-thirds of those identified as being in core need are experiencing affordability problems only (i.e. shelter costs equal to or greater than 30 per cent of their income). A further 12.1 per cent of clients occupy units which are affordable and suitable, but are in need of major repairs, while 4.5 per cent have only suitability problems. Approximately one-fifth have multiple problems. The incidence of public housing residents in core need was highest in British Columbia (71.8 per cent) and New Brunswick (68.9 per cent).

A review of the various rent scales currently in use and the manner in which they are implemented is warranted, given the incidence of affordability problems detected.

Fundamental differences exist between projects which house families and those which house senior citizens.

Significant differences exist between family and seniors projects with respect to client characteristics, the physical condition of the stock, client satisfaction and quality of life, project management and operating costs.

From a program planning, budgeting and monitoring perspective, it is inappropriate to treat the Public Housing Program as "one" program. The senior citizen public housing portfolio should be treated as a component distinct from the family public housing portfolio.

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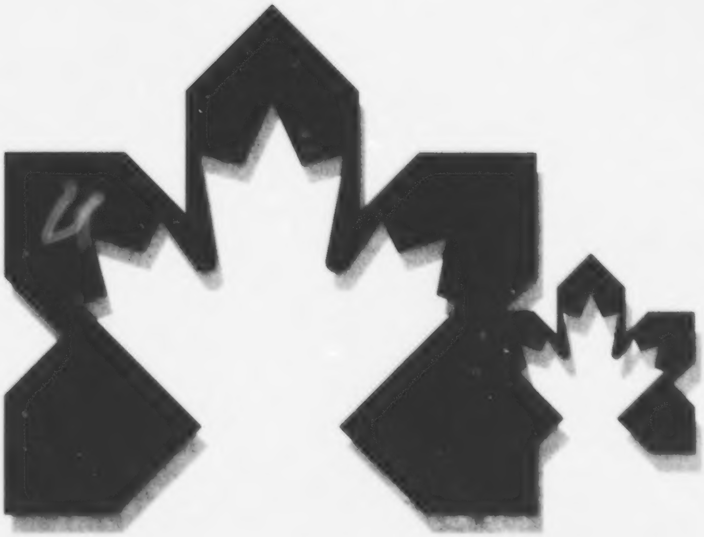
Public Housing Program

Program Evaluation Report



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EVALUATION OF THE PUBLIC HOUSING PROGRAM

Program Evaluation Division

Canada Mortgage and Housing Corporation

April 1990

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I INTRODUCTION

The federal government has supported public housing under the auspices of two programs. Section 79 of the National Housing Act permitted CMHC to cost-share initial capital costs and ongoing operating costs with the provinces and territories. Under this arrangement CMHC funded 75 per cent of the program. The second program, Section 81 of the National Housing Act, permitted 90 per cent loans to the provinces and territories, while Section 82 allowed CMHC to cost-share all program operating losses on a 50/50 basis.[1]

Since 1949 when the first public housing project was financed, and 1985 when new construction under the program terminated, over 205,000 units and 4,800 projects have been built representing over 40 per cent of the federal government's current social housing portfolio. Although new commitment activity under the program has ceased, the management of this portfolio continues to consume a large portion of CMHC expenditures on social housing (30 per cent) or about $450 million annually. Once a program designed to deliver new social housing, program resources are now focussed on the "property management" of a large, national, housing portfolio. It remains an important source of shelter for households in need. In pure financial terms, the public housing stock is a valuable asset which would be very difficult to replace.

This evaluation examines a broad range of issues pertaining to the physical condition and social environment of the public housing stock; the physical, financial and administrative management of the portfolio; and the clientele that the program serves.

A. Study Context

Since its inception in 1949, the Public Housing Program has often attracted attention on issues such as community acceptance of projects with a "negative" image. Public housing tenants have often been stigmatized for living in these projects and nearby residents have often expressed concern and sometimes outright opposition to the location of projects in their neighbourhoods. Also, tenants have expressed concern about the character of the living environment provided by public housing projects.

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[1] As a result of the recent statute revisions, Section 40, 43 and 44 of the National Housing Act are now numbered Sections 79, 81 and 82 respectively.

In 1984, CMHC completed the first major regeneration of a public housing project in Regina (Regent Court) as concerns about the Public Housing Program were broadening. Increasingly, concerns were being focussed on the physical condition of the stock and several factors were cited as contributing to its deteriorating condition, including the aging process, changing construction standards, tenant abuse of their projects and inadequate maintenance. In 1986, CMHC started the regeneration of a second public housing project in Halifax (Uniacke Square). Other provinces began to identify projects in their portfolios which would benefit from regeneration-type interventions.

At the same time, there was heightened federal and provincial interest in the overall management of the public housing stock. In 1986, federal, provincial and territorial housing ministers identified the proper maintenance, preservation and overall management of the existing social housing stock, particularly the public housing stock, as a major priority.

In the absence of information on the overall state of the public housing stock, it had not been possible to consider alternative strategies for dealing with a deteriorating public housing stock in a systematic fashion. To this end, an evaluation of the Public Housing Program was authorized by CMHC Management Committee in August, 1987.

For accountability purposes, the evaluation provides an assessment of the extent to which the program is currently achieving its objectives (as set by government) and at what costs. In addition the evaluation sets the stage for a policy and consultation process on options for the future management of the public housing stock.

B. Data Sources

In the course of this evaluation, a number of data collection and data compilation activities were undertaken.

a) Physical Inspections

Following the method of previous physical condition studies in England and the United States, a precise approach to the measurement of house condition, particularly for high-rise buildings, was developed and pretested. CMHC inspectors who administered the survey, conducted a second pilot of the instrument as part of a three day orientation program. Buildings, sites and units in a sample of 1,000 public housing projects were inspected. (Sample characteristics for the Physical Condition Survey are presented in Appendix A).

b) Client Survey

A survey was completed of a sample of 3,500 tenants living in the inspected projects. The method for the survey, which achieved an 80 per cent response rate, was a combination of mail questionnaire and telephone follow-up. In addition to collecting information on the characteristics of the client group and their units, tenants were asked to comment on the management of the project, quality of life in their project and the project's overall condition. (Sample characteristics for the Survey of Public Housing Tenants are presented in Appendix A).

c) Management Survey

All 4,800 project managers were asked to complete a mail questionnaire covering the following topics: characteristics of the project and its surrounding neighbourhood, physical condition and social problems, social and physical management practices, additions and upgrading needs of the project and project manager characteristics. The survey was administered with the cooperation of the local housing authorities and achieved a response rate of 85 per cent. (Sample characteristics for the Survey of Public Housing Project Managers are presented in Appendix A).

d) Provincial/Territorial Guidelines and Procedures

In establishing a profile of provincial/territorial property management programs and the level of support offered the local housing authorities, all provinces and territories were asked to provide their Guidelines and Procedures manuals. A follow-up telephone survey was also undertaken of provincial and territorial public housing administrators.

e) Case Studies of the Need for Conversions, Redesign or Redevelopment

In the absence of a clear understanding of the issues relating to major upgrading activities, eight case studies were completed representing a range of project ages, sizes and types, client types and settlement types. This work involved the collection of background information on each project including site plans, a site visit and on-site interviews. A group of technical experts in the field of social housing administration reviewed the results of the case studies prior to their finalization.

f) Operating Expense Data

Patterns of expenditure are important in understanding the condition of the portfolio and the impact of financial management on the program. CMHC manual records were collected, verified, coded and automated. From 1979-86, the data base includes all projects; from 1971-78, only the inspected projects are covered.

g) Project Characteristics Data

The need to create a project characteristics data base reflected the poor quality of data on such basic characteristics as the total number of units, distribution of project types and bedroom counts. In addition, data were required for drawing samples for the inspections, project manager and tenant surveys. Much of the initial data was provided by the provinces and territories. In the absence of provincial/territorial data, CMHC manual records were used. Data were collated, verified where possible, coded and automated.

C. Provincial/Territorial Involvement

Although CMHC has provided loans or capital for the construction or acquisition of public housing and continues to share in the operating losses of these programs, the provinces and territories are responsible for the day-to-day management of the programs. CMHC therefore worked very closely with provincial and territorial representatives to gain initial support and cooperation in undertaking the evaluation. In addition, CMHC informed both parties of progress on the evaluation and regularly solicited provincial and territorial advice. In view of its commitment to "the proper maintenance, preservation and overall management of the existing social (public) housing stock ...", CMHC worked most closely with the F/P/T Sub-Committee on the Existing Housing Stock.

D. Structure of the Report

Since CMHC no longer delivers new housing projects under the Public Housing Program, this evaluation is not an assessment of past program delivery. Instead, this evaluation focuses on the program in place for the "property management" or "portfolio management" of the public housing stock.

Further, this evaluation does not attempt to re-establish the need for a subsidized social housing program. This has been adequately established in recent evaluations, and an additional review would not supplement this information.

In responding to the evaluation issues identified in the Assessment Report of August, 1987, this evaluation addresses four main groupings of issues:

a) An assessment of the physical condition of the portfolio begins with a description of the main characteristics of the stock. It then examines the extent to which the program continues to provide adequate housing, by discussing condition ratings and repair/replacement costs, the need for additions, conversions, redesign and redevelopment. A long range projection of project condition is provided as is an analysis of the factors influencing physical condition.

b) The examination of the social environment begins by establishing the characteristics of public housing tenants, including their extent of need for housing assistance. Issues pertaining to quality of life, social problems, community acceptance and overall tenant satisfaction are then examined. An assessment of the degree to which public housing has become a permanent source of shelter for most tenants is also undertaken.

c) The second grouping of issues concerns management performance. A review of provincial/territorial guidelines and procedures examines the comprehensiveness of support from provinces and territories to the local housing authorities, efforts to maximize unit and overall condition, management planning and tenant relations and the project managers' roles and responsibilities. Management performance at the project level looks at the characteristics of project managers, maintenance and M&I identification and planning, the responsiveness of unit supply, project manager recognition of project condition and tenant involvement in the management of public housing.

d) Operating expenses are closely linked with management performance and physical condition. A profile of operating expenditures between 1979-86 is presented and differences for each of the sub-components of the budget are examined by key explanatory variables. A discussion of the factors contributing to high operating expenditures is also provided.

E. Program Background

History of the Public Housing Program

The record of publicly supported social housing in Canada began in 1938 with the passing of the first National Housing Act. This Act included a new federal program designed to accommodate low-income households. Specifically, the program assisted local housing authorities, limited dividend housing companies and non-profit housing associations in the construction of low-income rental housing projects to be leased at below market rents to low and moderate income families. In return for 90 per cent direct federal long term loans at preferred interest rates, the companies were required to limit their return on equity to a maximum of 5 per cent and rents charged could not exceed 20 per cent of family income.

It was not until the NHA Amendments of 1949 that the first program identified as "public housing" was introduced -- the Section 79 Federal/Provincial Public Housing Program. This program launched the federal/provincial partnership technique to acquire and develop land and to design, build and operate public housing projects. The federal/provincial partnership shared initial capital costs and operating losses on a 75 per cent/25 per cent basis respectively. As majority owner, CMHC accepted responsibility for approving, planning and designing public housing projects, although the management and administration of the projects and the program's clients were in most cases taken on by the provinces. Initially, the provinces were unenthusiastic about this responsibility, leading to low levels of activity in the early years of the program. Take-up by some provinces was consistently low over the course of the program. In addition to its use as a means of upgrading the housing quality of low-income households, the Section 79 Program was also used by some provinces in the redevelopment of blighted areas.

The design of the Section 79 Federal/Provincial Program and its operation led to a number of concerns regarding its overall effectiveness. First, there did not appear to be provincial willingness -- largely for financial and organizational reasons -- to address the housing problems of urban populations. The limited provincial/territorial share in the partnership was thought to contribute to a lower level of commitment from the provinces and territories; it was therefore seen as an impediment. The delegation of more responsibility to the provinces and territories was seen as a solution to this problem. Second, the Section 79 Federal/Provincial Program had removed the municipalities from any significant role in the delivery of public housing; yet municipalities are often the most affected by the program both in terms of its benefits and problems.

The NHA Amendments of 1964 addressed these problems with the introduction of a new program -- the Section 81/82 Regular Public Housing Program. These amendments also introduced the Section 82 Provincially-Financed Public Housing Program. Under Section 81, loans were offered by CMHC to municipalities and provinces/territories for up to 90 per cent of the capital costs of public housing projects. Section 82 authorized CMHC to absorb 50 per cent of operating losses associated with public housing projects for a period not exceeding 50 years. Provincial interest and program take-up increased with the introduction of the new program as the initial capital cost of building projects was now only 10 per cent (versus 25 per cent under the Section 79 program) and the provinces/territories retained ownership of the projects (unlike the Section 79 program). This is despite the fact that the provincial/territorial share of operating losses increased from 25 per cent to 50 per cent. The dramatic increase in the use of these programs under the NHA provided a strong impetus to provinces and territories to establish housing agencies of their own.

The 1969 (Hellyer) Task Force on Housing and Urban Development criticized the physical adequacy and quality of life in the large, high density public housing projects being developed in major urban centers. In response to Task Force criticisms, guidelines introduced in 1970 reduced the maximum rent-to-income ratio from 30 per cent to 25 per cent to permit higher income tenants to stay on and stabilize the public housing community.

Although NHA direct aid to low-income groups had increased and the stock of public housing continued to grow, the number of low-income families, individuals and elderly people in need of assistance remained high. There were increasing social problems being experienced in large-scale projects, prompting a sustained anti-public housing reaction. These concerns, coupled with the rise in public housing operating losses, spurred the federal government to consider alternative techniques of providing low-income housing. In 1973, the Section 27 Non-Profit and Section 61 Co-operative Housing Programs were introduced.

The deciding factor in the move away from public housing was the direct cost to government of building these projects. The Section 95 Non-Profit and Co-operative Housing Programs relied on private sector capital and provided an alternative to public housing. In 1978 the Section 81/82 Regular and Section 82 Provincially-Financed Programs were terminated, except in the Northwest Territories where activity continued until the end of 1983; while the use of Section 79 was restricted to those provinces and territories that had used it over the past decade, (i.e. Newfoundland, New Brunswick, Prince Edward Island, Nova Scotia, Saskatchewan and the Northwest Territories). With the introduction of the current social housing programs in 1986, new commitment activity ceased under Section 79. Section 95 now provides the legislative authority for building social housing projects which are wholly targeted to low-income households.

The late 1970's also witnessed the move by the federal government towards the streamlining and administrative simplification of the Public Housing Program. The Program's budgeting and claims settlement process was simplified. Under the former non-simplified process, budgets were prepared for each project; the provinces/territories in turn would review and submit these individual project budgets for CMHC approval. Under the current simplified process, only consolidated provincial/territorial portfolio budgets have to be submitted to CMHC for approval.

As noted earlier, an area of increasing focus is the physical state of the existing public housing portfolio. Both this and administrative economies in public housing were discussed at the Housing Ministers Conference in July 1986. As a result, the Federal/Provincial/Territorial Sub-Committee on the Maintenance and Preservation of the Existing Housing Stock was formed. Due to the large size of both the public housing stock and its associated annual budgetary expenditures, the Public Housing Program has been identified as a particularly important area of concern. Enhanced portfolio management of the social housing stock is also emphasized in recent CMHC Strategic Plans.

In CMHC, administration of the Public Housing Program has traditionally been handled centrally at National Office. However, the Program Portfolio Management Division relies heavily on field offices for support, particularly with respect to initial contact and recommendations regarding modernization and improvement activity. The National Office Review Study, undertaken by CMHC in 1986, confirmed the potential to decentralize responsibility for CMHC administration of the Public Housing Program to its field offices. The transfer of day-to-day administrative practices to CMHC field offices, including the review and analysis of budgets and payment of claims is well underway.

Program Description

A brief description of the key features of the Public Housing Program is presented below. New commitment activity under the Public Housing Program ceased as of December 31st, 1985. Nonetheless, the original production phase will be described in addition to the current operating phase since several of the identified evaluation issues relate back to original project design and construction.

Section 79 Federal/Provincial Program:

Under Section 79 of the NHA, CMHC and the government of a province or territory entered into agreements for the construction or acquisition of public housing projects.

Capital costs were shared 75/25 by the federal and provincial/ territorial governments respectively. The provinces and territories, in turn, could request that municipalities participate in their 25 per cent share. Amortization of the costs was spread over a period of up to 50 years with interest rates set by the partnership.

Operating losses on the Section 79 projects are cost-shared on the same basis as the original project costs. The projects are managed by housing authorities, or their equivalent, set up by the provinces/territories.

Rents charged to the occupants are based on the federal or a provincial/territorial rent-geared-to-income scale and generally equal 25 per cent or less of a household's income (except in British Columbia and New Brunswick where the upper range has been revised upward to 30 per cent). Federal subsidies are calculated according to the scale producing the higher revenues.

Sections 81/82 Regular and 82 Provincially-Financed Programs:

Under Section 81 of the NHA, CMHC made long term loans to provinces, territories, municipalities, or public housing agencies for the construction or acquisition of a public housing project. The loan could not exceed 90 per cent of the approved project capital costs and had an amortization period of up to 50 years. The projects are owned and operated by the provinces, territories, municipalities or public housing agencies. Under the Section 82 Provincially-Financed Program, the projects were financed entirely by the provinces and territories (i.e. there were no Section 81 loans involved).

Upon execution of a Federal/Provincial Operating Agreement, the federal and provincial/territorial governments commenced the sharing of operating losses on a 50/50 basis under Section 82 of the NHA.

Rents charged to the occupants are based on the same federal or provincial/territorial rent-to-income scales as employed in the Section 79 Federal/Provincial Program. The calculation of operating losses, for federal subsidy purposes, uses the scale producing the greater revenues.

Program Objectives

The Public Housing Program's officially-stated objectives were established during the production phase of the program and appear in CMHC's program delivery guidelines and procedures manuals. These objectives contain a large degree of overlap between sub-programs and are as follows:

Section 79 Federal/Provincial Program:

1. To provide adequate housing accommodation for individuals and families of low-income within their financial capabilities.
2. To achieve the production of public housing in the most efficient and effective manner and at reasonable cost to the governments involved.
3. To cost-share with the provinces the difference between the rent paid according to the rental scale and the actual cost of amortizing and operating the project.

Section 81/82 Regular Program:

1. To provide decent, safe and sanitary housing for individuals and families of low income suitable to their identified needs and at rents they can afford.

2. To increase the housing stock available to low income people.

3. To provide accommodation which most effectively integrates public housing occupants into the community.

4. To achieve the production of public housing in the most efficient and effective manner and at reasonable cost to the governments involved.

Section 82 Provincially-Financed Program:

1. To provide adequate housing accommodation for individuals and families of low income within their financial capabilities.

2. To cost-share with the provinces the difference between the rent paid according to the rental scale and the actual cost of amortizing and operating the project.

It should be noted there are no officially-stated program objectives for the ongoing administration of the Public Housing Program. However, in recognition of the fact that the Public Housing Program is now entirely property management oriented, CMHC's Program Portfolio Management Division (PPMD) has re-stated the original delivery-oriented objectives in its internal administrative work routines. This re-statement of program objectives did not entail the development of any new objectives, but rather the deletion of those original objectives which were delivery oriented, and the slight re-wording of the remaining ones. The resulting current management objectives stated in PPMD's administrative work routines apply to both the Section 79 Federal/Provincial Program and the Section 82 Regular Program:

1. To accommodate individuals and families of low-income at rentals which are within their financial capabilities.

2. To cost-share with the provinces the difference between the rent paid according to the rental scale and the actual cost of amortizing and operating the project.

Several working-level administrative objectives have arisen from time to time. For instance, the first objective of the 1987 Work Plan of CMHC's Program Portfolio Management Division is "To enhance the overall administration and management of the Corporation's public and rural and native housing portfolios".

The important point to note is that there has been no comprehensive and systematic attempt to date aimed at re-evaluating and re-stating the Public Housing Program's objectives to reflect the fact that it has shifted out of the delivery phase and now remains solely in the management phase.

In this same vein, it is worth noting that there are no administrative guidelines and procedures manuals at the federal level for the management of the Public Housing Program. In the absence of stock management oriented manuals, other documents have been produced and circulated to the provinces and within CMHC. The most significant of these was the simplification or disentanglement package negotiated during the early 1980's. In 1985, administrative work routines were produced by CMHC for its internal use. In 1988, CMHC provincial offices were provided with a document to assist in the decentralization of public housing administration.

F. Summary

The evaluation of the Public Housing Program responds to a number of social and physical issues which have emerged since the program was introduced in 1949. In light of recent concerns over seriously deteriorated projects, information on the condition of the portfolio and its regeneration potential is required as a basis for subsequent consultation and policy work in the public housing stock management and regeneration areas.

In responding to a set of key issues, several surveys were conducted and data bases compiled. The most important data sources were inspections of buildings, units and sites in 1,000 public housing projects, a survey of project managers in all 4,800 public housing projects and a survey of a sample of 3,500 tenants in the 1,000 inspected public housing projects.

CMHC worked closely with the provinces and territories at all stages of the evaluation, in particular, the F/P/T Sub-Committee on the Existing Housing Stock.

The Public Housing Program introduced in 1949, was terminated in 1985. The objectives, originally designed for a new construction delivery program, have not been formally re-stated to reflect the current portfolio management orientation of the program. There are currently no administrative guidelines and procedures manuals at the federal level for the management of the Public Housing Program.

Poor data quality and the absence of automated data for managing the program, both of which were identified as problems at the planning stages of the evaluation, can be rectified to a large extent by the data collection initiatives associated with this evaluation and with new initiatives from CMHC's Program Portfolio Management Division.

II CHARACTERISTICS OF THE PUBLIC HOUSING PORTFOLIO

The public housing stock is considerably more diverse in character than may be commonly recognized. Perceptions of public housing in Canada are in many cases unduly influenced by the most visible components of the portfolio. As a result, the term "public housing" evokes for many an image of large, high density projects centered in the nation's largest cities. This section presents a brief overview of the characteristics of the public housing portfolio.

A. Physical Characteristics

A large variety of project types have been constructed or acquired under the Public Housing Program (Table 2.1). Half of all projects consist of either detached, semi-detached or row housing structures. Low-rise apartment structures (buildings with less than four storeys) constitute an additional one-third of all projects. These relatively low density project types account for roughly 48 per cent of all public housing units. High-rise projects (buildings with four or more storeys) constitute only 11.4 per cent of all projects. Due to their larger average size, however, high-rise projects contain 38.8 per cent of all dwelling units. Projects which include a mixture of building types account for the remaining 3.9 per cent of projects and 13.6 per cent of public housing units.

TABLE 2.1
PUBLIC HOUSING PORTFOLIO (1988)
BY PROJECT TYPE

	PROJECTS		UNITS	
PROJECT TYPE	NUMBER	PER CENT	NUMBER	PER CENT
Detached, Semi & Row	2,311	50.9	45,969	23.8
Low rise	1,537	33.8	45,980	23.8
High rise	517	11.4	75,089	38.8
Mixed (no high rise)	114	2.5	10,369	5.3
Mixed (with high rise)	64	1.4	16,097	8.3
ALL	4,543	100.0	193,504	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC 1988.
NOTE: Project type information is missing for 258 projects.

The majority of public housing projects are relatively small in size. Fully 77.2 per cent of all projects contain fewer than 50 units (Table 2.2). Projects with 100 units or more comprise only 11.3 per cent of all projects, but account for roughly one-half of all units in the portfolio. While the largest projects (with 200 units or more) comprise only 3.6 per cent of all projects, they account for 27.4 per cent of all units.

TABLE 2.2
PUBLIC HOUSING PORTFOLIO BY PROJECT SIZE

	PROJECTS		UNITS	
PROJECT SIZE	**NUMBER**	**PER CENT**	**NUMBER**	**PER CENT**
Less than 10 units	955	19.9	5,192	2.5
10 - 49 units	2,752	57.3	57,829	28.1
50 - 99 units	552	11.5	37,381	18.2
100 - 199 units	371	7.7	48,860	23.8
200 units or more	171	3.6	56,430	27.4
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

As might be expected, a clear relationship exists between project type and project size (Table 2.3). Detached, semi-detached or row housing projects contain an average of 20 units. Low-rise apartment projects are somewhat larger, averaging 30 units. In contrast, high-rise projects and mixed projects with a high-rise component contain an average of 145 and 252 units respectively. Nearly three-fifths of high-rise projects and almost all mixed projects with a high-rise component contain more than 100 units. Although a clear relationship exists between project type and size, exceptions to this trend can also be noted. As many as 13.2 per cent of all projects containing 100 or more units were comprised wholly of detached, semi-detached or row housing structures. Overall, 29.1 per cent of all projects with 100 or more units did not have a high-rise component.

TABLE 2.3
PUBLIC HOUSING PORTFOLIO
PROJECT SIZE BY PROJECT TYPE

PROJECT TYPE	MEAN PROJECT SIZE (UNITS)	MEDIAN PROJECT SIZE (UNITS)	100 OR MORE UNITS PER PROJECT		
			# OF PROJECTS	INCIDENCE (%)	PROPORTION OF TOTAL (%)
Detached, Semi & Row	20	10	68	2.9	13.2
Low rise	30	21	50	3.3	9.7
High rise	145	105	308	59.6	59.7
Mixed (no high rise)	91	52	32	28.1	6.2
Mixed (with high rise)	252	201	58	90.6	11.2
ALL	43	20	516	11.4	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC 1988.

NOTE: Project type information is missing for 258 projects.

B. Program Activity and Age Profile of the Stock

The majority of public housing has been financed under the Section 81/82 Program (Table 2.4). This program accounts for 69.9 per cent of all public housing projects and 79.9 per cent of all units. Although provincial governments were responsible for a larger share of operating losses associated with Section 81/82 projects, they required a smaller amount of capital to initiate projects than under Section 79. Projects financed under Section 79 comprise the remainder of the portfolio (30.1 per cent of all projects and 20.1 per cent of all units). Section 79 projects were developed through a federal-provincial partnership. Under the terms of the agreements, the federal government is a joint owner of the 41,254 public housing units financed under Section 79 and is responsible for 75 per cent of all operating losses.

TABLE 2.4
PUBLIC HOUSING PORTFOLIO BY PROGRAM

PROGRAM	PROJECTS NUMBER	PROJECTS PER CENT	UNITS NUMBER	UNITS PER CENT
Section 79	1,444	30.1	41,254	20.1
Section 81/82	3,357	69.9	164,438	79.9
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC 1988.

NOTE: Included in the Section 81/82 figures are 444 projects with 16,830 units which received Section 82 funding only.

Although the Section 79 Public Housing Program was initiated in 1949, virtually all public housing has been developed since the 1964 amendments to the NHA which introduced the Section 81/82 Program (Table 2.5). Only 1.8 per cent of all projects and 4.3 per cent of all units were developed prior to 1964. The majority of the public housing portfolio was developed during the 1970's. Roughly two-thirds of all public housing projects (64.9 per cent) and units (69.1 per cent) were put in place between 1970 and 1979. One-quarter of all public housing projects (13.3 per cent of all units) were developed after 1980.

TABLE 2.5
PUBLIC HOUSING PORTFOLIO BY YEAR OF COMPLETION

PROJECT AGE	PROJECTS NUMBER	PROJECTS PER CENT	UNITS NUMBER	UNITS PER CENT
Pre-1964	86	1.8	8,833	4.3
1964-1969	371	7.7	27,155	13.3
1970-1974	1,330	27.7	77,383	37.6
1975-1979	1,784	37.2	64,867	31.5
1980-1987	1,230	25.6	27,454	13.3
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

Contrary to popular impressions, the public housing portfolio has a fairly young age profile (Table 2.6). In 1988, fully 87.2 per cent of all public housing units were less than 20 years old; just under one-fifth were less than 10 years old.

TABLE 2.6
PUBLIC HOUSING PORTFOLIO BY AGE GROUP

	PROJECTS		UNITS	
AGE OF STOCK IN 1988	**NUMBER**	**PER CENT**	**NUMBER**	**PER CENT**
0 - 4 years	328	6.8	4,200	2.0
5 - 9 years	1,204	25.1	34,692	16.9
10 - 14 years	1,769	36.9	67,717	32.9
15 - 19 years	1,149	23.9	72,841	35.4
20 - 24 years	265	5.5	17,409	8.5
25 - 29 years	32	0.7	3,696	1.8
30 years and over	54	1.1	5,137	2.5
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Because some projects consist of acquired buildings, the completion date is not an accurate indicator of project age in all cases.

Although it currently has a youthful profile, the aging of the public housing portfolio over the next two decades can be expected to bring in its wake increasing repair requirements. While only 2.5 per cent of all public housing (5,137 units) was 30 years or older in 1988, by the year 2,000, just under one-quarter of the stock (47,667 units) will cross this threshold (Table 2.7). One decade later, in the year 2010, 187,712 units (91.3 per cent of the total stock) will be aged 30 years or older.

TABLE 2.7
PUBLIC HOUSING PORTFOLIO
DWELLING AGE PROJECTION, 1990 - 2010

			UNITS AGED 30 YEARS OR OLDER	
YEAR	AVERAGE AGE	MEDIAN AGE	# OF UNITS	% OF TOTAL STOCK
1988	14	12	5,137	2.5
1990	16	14	5,982	2.9
1995	21	19	10,676	5.2
2000	26	24	47,667	23.2
2005	31	29	128,769	62.6
2010	36	34	187,712	91.3

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

Not surprisingly the housing developed under Section 79 has the oldest age profile (Table 2.8). This is an important consideration for the federal government in that it shares ownership of this stock with the provinces and territories. Roughly one-third (32.1 per cent) of Section 79 units were developed prior to 1970, compared with only 13.8 per cent of Section 81/82 units.

TABLE 2.8
PUBLIC HOUSING UNITS BY PROGRAM AND YEAR OF COMPLETION

	S.79		S.81/82		ALL	
PROJECT AGE	# OF UNITS	PER CENT	# OF UNITS	PER CENT	# OF UNITS	PER CENT
Pre-1964	8,833	21.4	0	0.0	8,833	4.2
1964-1969	4,400	10.7	22,755	13.8	27,155	13.3
1970-1974	7,949	19.3	69,434	42.2	77,383	37.6
1975-1979	10,301	25.0	54,566	33.2	64,867	31.6
1980-1987	9,771	23.6	17,683	10.8	27,454	13.3
ALL	41,254	100.0	164,438	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

C. Locational Distribution

The volume of activity under the Public Housing Program varies considerably among provinces and territories. The geographical distribution of the public housing portfolio is illustrated in Table 2.9. By far, the largest proportion of the stock is located in Ontario. With 1,329 projects and 96,582 units, Ontario's public housing portfolio accounts for 27.6 per cent of all projects and almost half (47.0 per cent) of all units. Quebec has the next largest stock of public housing. Quebec's 630 projects with 35,632 units comprise 13.1 per cent of all projects nationwide and 17.3 per cent of all units. The remaining provinces and territories account for just over one-third of all units. Among this group, the Yukon has the smallest portfolio (261 units) while Alberta has the largest (16,899 units).

TABLE 2.9
PUBLIC HOUSING PORTFOLIO BY PROVINCE AND TERRITORY

	PROJECTS		UNITS	
PROVINCE/TERRITORY	NUMBER	PER CENT	NUMBER	PER CENT
Newfoundland	176	3.7	4,710	2.3
Prince Edward Island	90	1.9	951	0.5
Nova Scotia	477	9.9	10,288	5.0
New Brunswick	157	3.3	3,892	1.9
Quebec	630	13.1	35,632	17.3
Ontario	1,329	27.6	96,582	47.0
Manitoba	336	7.0	12,808	6.2
Saskatchewan	577	12.0	12,353	6.0
Alberta	531	11.1	16,899	8.2
British Columbia	100	2.1	7,978	3.9
Yukon	22	0.5	261	0.1
Northwest Territories	376	7.8	3,338	1.6
CANADA	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

An indication of the relative age profile of the public housing stock in each province and territory is shown in Table 2.10. On average, the public housing stock in New Brunswick, Ontario and British Columbia is the oldest in the country. The stock built prior to 1970 is particularly prominent in the public housing portfolio in Ontario (28.1 per cent), Newfoundland (27.1 per cent), New Brunswick (23.9 per cent) and British Columbia (21.6 per cent). The youngest stock is found in the Northwest Territories, Prince Edward Island, Alberta and Saskatchewan.

TABLE 2.10
PUBLIC HOUSING UNITS BY PROVINCE AND TERRITORY AND YEAR OF COMPLETION

PROVINCE/ TERRITORY	Pre-1964 (%)	1964-1969 (%)	1970-1974 (%)	1975-1979 (%)	1980-1987 (%)	AVERAGE ALL (%)	AVERAGE AGE (yrs.)
Newfoundland	11.5	15.6	9.2	34.4	29.3	100.0	14
P.E.I.	0.0	3.2	13.0	39.4	44.4	100.0	9
Nova Scotia	7.1	9.8	34.8	26.8	21.5	100.0	14
New Brunswick	15.0	8.9	47.6	25.2	3.3	100.0	17
Quebec	2.2	0.9	39.0	41.0	16.9	100.0	13
Ontario	4.9	23.2	44.0	24.1	3.8	100.0	16
Manitoba	2.0	2.6	51.4	39.9	4.1	100.0	14
Saskatchewan	3.2	6.0	12.6	39.3	38.9	100.0	11
Alberta	0.0	0.9	21.6	38.6	38.9	100.0	10
B.C.	9.8	11.8	35.3	43.1	0.0	100.0	16
Yukon	0.0	0.0	65.1	34.9	0.0	100.0	14
N.W.T.	0.0	3.6	6.0	38.3	52.1	100.0	8
CANADA	4.3	13.3	37.6	31.5	13.3	100.0	14

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

Public housing has been provided in communities of all sizes as well as in rural areas. The distribution of the portfolio by settlement size is illustrated in Table 2.11. Only half (55.2 per cent) of all public housing units are located in urban areas with population in excess of 100,000. Settlements with populations of less than 30,000 account for almost two-thirds (65.1 per cent) of all public housing projects but, due to their smaller average size, comprise a considerably smaller proportion of all units (29.6 per cent). It is interesting to note that 8.8 per cent of all public housing units are located in rural areas (with populations under 2,500). In total, the stock of public housing units in rural areas provides some 6,567 family units, 9,848 senior units, 1,563 units in projects having a mixture of family and senior clients and 90 units in projects serving clients other than families and seniors. These 18,068 public housing units represent a sizeable contribution to the meeting of needs in rural areas when compared to the total portfolio of units provided under the Rural and Native Housing Program (roughly 22,000 in 1988).

TABLE 2.11
PUBLIC HOUSING PORTFOLIO BY SETTLEMENT SIZE

SETTLEMENT SIZE	PROJECTS NUMBER	PROJECTS PER CENT	UNITS NUMBER	UNITS PER CENT
Rural	1,418	29.5	18,068	8.8
2,500 - 9,999	1,080	22.5	22,165	10.8
10,000 - 29,999	631	13.1	20,603	10.0
30,000 - 99,999	584	12.2	31,358	15.2
100,000 - 499,999	510	10.7	58,908	28.7
500,000 and over	578	12.0	54,590	26.5
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

D. Clients Served

Roughly equal numbers of families and seniors have been served by the Public Housing Program (Table 2.12). The mix of family and seniors projects, however, varies considerably among provinces and territories (Table 2.13). Newfoundland, the Northwest Territories and the Yukon have the highest proportions of family projects. In contrast, Saskatchewan, Prince Edward Island, and Nova Scotia have the highest proportions of seniors projects. Ontario, Quebec, New Brunswick, Alberta and Manitoba have the most balanced portfolios, in terms of client type.

TABLE 2.12
PUBLIC HOUSING PORTFOLIO BY CLIENT TYPE

CLIENT TYPE	PROJECTS NUMBER	PROJECTS PER CENT	UNITS NUMBER	UNITS PER CENT
Family	2,320	48.3	89,615	43.6
Seniors	2,271	47.3	101,263	49.2
Family & Seniors	192	4.0	14,247	6.9
Other	18	0.4	567	0.3
ALL	4,801	100.0	205,692	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

TABLE 2.13
PUBLIC HOUSING UNITS
BY CLIENT TYPE AND BY PROVINCE AND TERRITORY

PROVINCE/ TERRITORY	CLIENT TYPE					
	FAMILY		SENIORS		MIXED	
	# OF UNITS	PER CENT	# OF UNITS	PER CENT	# OF UNITS	PER CENT
Newfoundland	4,301	91.3	199	4.2	210	4.5
P.E.I.	280	29.4	671	70.6	0	0.0
Nova Scotia	2,969	28.9	6,702	65.1	617	6.0
New Brunswick	1,998	51.3	1,700	43.7	194	5.0
Quebec	14,030	39.4	14,527	40.7	7,075	19.9
Ontario	45,948	47.6	49,770	51.5	864	0.9
Manitoba	5,013	39.1	6,363	49.7	1,432	11.2
Saskatchewan	2,782	22.7	8,991	73.3	492	4.0
Alberta	6,836	40.5	8,769	51.8	1,294	7.7
B.C.	2,274	29.8	3,342	43.7	2,027	26.5
Yukon	195	74.7	24	9.2	42	16.1
N.W.T.	2,989	93.6	205	6.4	0	0.0
CANADA	89,615	43.7	101,263	49.4	14,247	6.9

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Not included in this table are 567 units which serve clients other than families and seniors.

Over the life of the Public Housing Program, the client mix has evolved from one dominated by family clients to an emphasis on seniors (Table 2.14). Prior to the 1970's, the Public Housing Program served primarily family clients. Roughly three-quarters of the public housing units developed between 1950 and 1969 were in family projects. This proportion dropped to 48.7 per cent between 1970 and 1974 and to 20.1 per cent between 1975 and 1979. This trend was partially reversed between 1980 and 1987, when the proportion of units developed in family projects rose to 30.3 per cent.

TABLE 2.14
PUBLIC HOUSING PORTFOLIO BY CLIENT TYPE AND YEAR OF COMPLETION

	FAMILY		SENIORS		MIXED		
PROJECT AGE	# OF UNITS	% OF TOTAL	# OF UNITS	% OF TOTAL	# OF UNITS	% OF TOTAL	TOTAL UNITS
Pre-1964	6,633	75.1	0	0.0	2,200	24.9	8,833
1964-1969	21,098	77.7	4,303	15.8	1,754	6.5	27,155
1970-1974	40,090	51.9	32,273	41.8	4,873	6.3	77,236
1975-1979	13,370	20.7	46,927	72.6	4,323	6.7	64,620
1980-1987	8,424	30.9	17,760	65.1	1,097	4.0	27,281
ALL	89,615	43.7	101,263	49.4	14,247	6.9	205,125
AVERAGE AGE		16		12		16	

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Not included in this table are 567 units developed between 1970 and 1987 which serve clients other than families and seniors.

E. Management Structure

In the majority of provinces and territories (Alberta, Saskatchewan, Manitoba, Ontario, Quebec, Nova Scotia and the Northwest Territories), responsibilities for day-to-day management of public housing projects are decentralized to local housing authorities or other private organizations. In the remaining provinces and territories, these responsibilities are partially or wholly assumed by provincial or territorial housing agencies, often through regional offices. In British Columbia and Newfoundland, the provincial government is solely responsible for the day-to-day management of the portfolio. In New Brunswick and the Yukon, the province/territory manages all units except those under the management of the Saint John Housing Authority and the Whitehorse Housing Authority, respectively. In Prince Edward Island, family projects are managed by local housing authorities while seniors projects are managed directly by the province.

There are a total of 1,092 local housing authorities, private organizations or provincial/territorial offices which manage public housing projects in Canada. The local housing authorities contained in this figure represent only a portion of the total number in Canada, as this discussion concerns only those groups which manage public housing. The portfolio of public housing managed by individual management groups ranges in size from 2 units to 29,151 units. Most groups manage relatively small public housing portfolios. The majority manage only one project, while less than one-fifth manage 5 or more projects (Table 2.15). Similar patterns are evident when measured in terms of the number of units. Two-thirds of all local management groups have fewer than 50 units in their portfolio, while only one-fifth manage portfolios of 100 units or more.

TABLE 2.15
LOCAL PUBLIC HOUSING MANAGEMENT GROUPS BY SIZE CATEGORIES

NUMBER OF PUBLIC HOUSING PROJECTS	# OF MANAGEMENT GROUPS	% OF TOTAL
1	589	54.0
2	198	18.1
3	70	6.4
4	41	3.8
5 or more	194	17.7
TOTAL	1,092	100.0
NUMBER OF UNITS		
Less than 10	140	12.9
10 - 19	230	21.0
20 - 49	344	31.5
50 - 99	136	12.4
100 or more	242	22.2
TOTAL	1,092	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC 1988.

NOTE: Offices of provincial and territorial housing agencies are included in these totals where they assume responsibilities for day-to-day management of public housing projects.

Nationally, individual local housing authorities, private organizations and provincial/territorial offices manage an average of 4 projects and 189 units (Tables 2.16 and 2.17). These figures are subject to considerable variation among provinces and territories, however, due to differences in the size of the portfolio and the degree to which management responsibilities are decentralized. The average number of projects per local management group ranges from a low of 2 in Saskatchewan, Alberta, Quebec and the Yukon to a high of 25 in Newfoundland. The average number of units per management group ranges from a low of 29 in the Yukon to 1,581 in Ontario (Table 2.17). Average figures for Ontario are skewed by the presence of the two largest local management groups in the country: the Metropolitan Toronto Housing Authority (with 29,412 units) and the Metropolitan Toronto Housing Company Ltd. (with 12,896 units).

Judging by the number of groups involved in the management of public housing projects, the decentralization of portfolio management responsibilities is most apparent in Quebec, Alberta and Saskatchewan.

Local public housing management groups tend to be larger in the Atlantic Provinces, Ontario, British Columbia and the Northwest Territories.

TABLE 2.16
NUMBER OF PROJECTS PER MANAGEMENT GROUP BY PROVINCE/TERRITORY

	NUMBER OF PROJECTS PER MANAGEMENT GROUP				
PROVINCE/ TERRITORY	**NUMBER OF MGMT. GROUPS**	**MEAN**	**MEDIAN**	**UNDER 5 (%)**	**5 OR MORE (%)**
Newfoundland	7	25	12	14.3	85.7
P.E.I.	10	9	4	60.0	40.0
Nova Scotia	44	11	4	54.5	45.5
New Brunswick	9	16	15	10.0	90.0
Quebec	282	2	1	94.0	6.0
Ontario	61	22	17	4.9	95.1
Manitoba	117	3	1	91.5	8.5
Saskatchewan	243	2	1	91.8	8.2
Alberta	259	2	1	97.7	2.3
B.C.	7	14	15	0.0	100.0
Yukon	9	2	2	88.9	11.1
N.W.T.	44	9	9	18.2	81.8
CANADA	1,092	4	1	82.3	17.7

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

TABLE 2.17
NUMBER OF UNITS PER MANAGEMENT GROUP BY PROVINCE AND TERRITORY

PROVINCE/ TERRITORY	NUMBER OF UNITS PER MANAGEMENT GROUP				
	NUMBER OF MGMT. GROUPS	MEAN	MEDIAN	UNDER 100 (%)	100 OR MORE (%)
Newfoundland	7	673	315	0.0	100.0
Prince Edward Island	10	95	25	90.0	10.0
Nova Scotia	44	231	58	68.2	31.8
New Brunswick	9	432	313	10.0	90.0
Quebec	282	125	30	75.2	24.8
Ontario	61	1,581	599	3.3	96.7
Manitoba	117	111	25	79.1	20.9
Saskatchewan	243	51	16	93.0	7.0
Alberta	259	65	20	91.9	8.1
British Columbia	7	1,136	830	0.0	100.0
Yukon	9	29	16	88.9	11.1
Northwest Territories	44	76	61	72.7	27.3
CANADA	1,092	189	29	77.8	22.2

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

F. Summary

This section has provided an overview of the characteristics of the public housing portfolio. This review has demonstrated that the portfolio is diverse in nature. Public housing projects cover a full range of building types and project size categories. The majority of the portfolio has been developed under Section 81/82. As a consequence, the stock has a younger age profile than might be otherwise expected. Although a Public Housing Program has been in place for almost 40 years, close to 90 per cent of all units have been constructed or acquired in the last 20 years. Public housing has been developed in every province and territory. The Province of Ontario has been particularly active, accounting for almost one-half of the public housing stock nationwide. Public housing has been provided in communities of all sizes and in rural areas. The portfolio is roughly evenly split between family and seniors projects. An emphasis on seniors projects emerged during the 1970's, and is particularly pronounced in the Provinces of Saskatchewan, Prince Edward Island and Nova Scotia. In the majority of provinces and territories, responsibilities for the day-to-day management of public housing projects are decentralized to local housing authorities or other private organizations.

III PROFILE OF PUBLIC HOUSING RESIDENTS

A. Introduction

Previous chapters have described the key operating characteristics of the Public Housing Program and the nature of the portfolio. This chapter presents a profile of the households which reside in public housing. This chapter draws extensively on a survey of public housing residents which was undertaken as part of the evaluation. Conducted between November 1988 and March 1989, questionnaires were mailed to a total of 3,513 residents nationwide. Completed responses were returned by 2,798 residents (a response rate of 80 per cent).

B. Demographic Structure

Approximately 430,000 people reside in public housing projects nationwide. Children and senior citizens comprise the majority of public housing residents (Table 3.1). Just over one-quarter of public housing residents are children under the age of 15 years. A similar proportion of clients are aged 65 years or older, approximately two and one-half times the proportion recorded in the general population. Almost two-thirds (62.2 per cent) of public housing residents are

TABLE 3.1
AGE DISTRIBUTION OF PUBLIC HOUSING RESIDENTS BY CLIENT GROUP

	PER CENT OF PUBLIC HOUSING CLIENTS				
AGE GROUP	**FAMILY PROJECTS**	**SENIORS PROJECTS**	**FAM/SEN PROJECTS**	**ALL PROJECTS**	**PER CENT OF GENERAL POPULATION**
Under 15	37.5	0.4	29.2	26.7	21.3
15 - 24	20.4	0.8	16.0	14.7	16.5
25 - 34	13.8	0.3	9.2	9.8	17.9
35 - 44	12.3	1.8	11.9	9.4	14.4
45 - 54	8.1	1.9	8.2	6.4	10.1
55 - 64	4.5	12.3	6.8	6.8	9.2
65 - 74	2.6	38.5	10.8	13.0	6.5
75 - 84	0.8	34.2	7.3	10.4	3.2
85 and over	0.1	9.9	0.6	2.8	0.9
ALL AGES	100.0	100.0	100.0	100.0	100.0
Sample (n)	(1,089)	(1,289)	(229)	(2,615)	

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1986 Census of Canada, Statistics Canada, Cat. 93-101.

female, a reflection of the preponderance of female household heads among single parent families as well as the greater longevity of women.

As was mentioned in the previous chapter, public housing has been developed to serve two principal client groups: families and senior citizens. In most cases, these groups are housed separately (less than 5 per cent of all projects house families and senior citizens together). As would be expected, when projects housing different client groups are considered separately, the age distribution is considerably more polarized. Children under the age of 15 constitute over one-third of all residents of family projects. Fully 58 per cent of residents are under the age of 25 years. Just under one-half of all residents of seniors projects are 75 years of age or older and 9.9 per cent are at least 85 years of age.

Provincial variations in the age structure of the client population are presented in Table 3.2. Differing targeting within the population in need is reflected in variations in the age profile of the client population across the country. For example, Manitoba, Alberta and Newfoundland have the highest proportions of clients aged under 15 years. In contrast, Saskatchewan, Prince Edward Island, Nova Scotia and

TABLE 3.2
AGE DISTRIBUTION OF PUBLIC HOUSING RESIDENTS
BY PROVINCE AND TERRITORY

	PER CENT OF RESIDENTS IN EACH AGE GROUP						
PROVINCE/ TERRITORY	UNDER 15 YEARS	15-24 YEARS	25-44 YEARS	45-64 YEARS	65-74 YEARS	75+ YEARS	SAMPLE SIZE (n)
Newfoundland	30.9	22.7	30.6	12.4	3.0	0.4	(152)
P.E.I.	26.5	6.3	19.7	4.8	21.8	20.9	(197)
Nova Scotia	19.8	16.1	15.0	13.9	14.4	20.8	(200)
New Brunswick	27.6	17.4	20.8	17.3	8.8	8.1	(214)
Quebec	16.0	16.3	17.4	16.8	18.1	15.2	(433)
Ontario	26.5	15.3	18.9	14.3	12.7	12.3	(655)
Manitoba	41.1	4.1	20.8	7.8	9.5	16.7	(144)
Saskatchewan	22.5	7.1	14.5	7.1	23.6	25.2	(193)
Alberta	34.9	12.4	20.5	7.1	10.8	14.3	(175)
B.C.	26.3	13.5	21.6	16.1	11.4	11.1	(205)
Yukon	-	-	-	-	-	-	(21)
N.W.T.	-	-	-	-	-	-	(26)
CANADA	26.7	14.7	19.2	13.2	13.0	13.2	(2,615)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.
NOTE: Insufficient cases for analysis in the Yukon and N.W.T.

Quebec have the highest proportions of clients aged 65 years or older. An emphasis on serving the elderly is most prominently displayed in Saskatchewan, where fully one-quarter of the client population is aged 75 years or older.

The characteristics of households residing in public housing are displayed in Table 3.3. Single person households clearly predominate among public housing residents, accounting for approximately one-half of all client households. Single parent households comprise the next largest group (24.1 per cent) and are almost twice as numerous as those where both parents are present (13.3 per cent). When compared to the

TABLE 3.3
CHARACTERISTICS OF HOUSEHOLDS RESIDING IN PUBLIC HOUSING

	PER CENT OF PUBLIC HOUSING CLIENTS				**PER CENT OF ALL RENTER HOUSEHOLDS**[1]
HOUSEHOLD CHARACTERISTICS	**FAMILY PROJECTS**	**SENIORS PROJECTS**	**FAM/SEN PROJECTS**	**ALL PROJECTS**	
HOUSEHOLD TYPE					
One person living alone	14.6	85.6	37.0	52.0	40.4
One adult with children	50.1	0.3	36.0	24.1	10.2
Couple with children	28.5	0.7	12.8	13.3	20.5
Couple without children	3.6	12.9	10.8	8.7	17.8
Other	3.2	0.5	3.5	1.9	11.1
Sample size (n)	(1,032)	(1,262)	(217)	(2,519)	(10,131)
HOUSEHOLD SIZE					
One person	13.7	85.4	39.1	51.3	40.4
Two persons	24.6	13.7	17.6	18.5	29.8
Three persons	23.6	0.3	20.1	11.8	14.2
Four persons	18.0	0.6	18.6	9.4	9.9
Five persons	11.9	0.0	3.1	5.4	4.0
Six or more persons	8.2	0.0	1.5	3.6	1.7
Sample size (n)	(1,069)	(1,307)	(224)	(2,609)	(10,131)
DISABLED/INFIRM PERSON IN HOUSEHOLD					
Yes	9.0	21.7	11.7	15.5	N/A
No	91.0	78.3	88.3	84.5	N/A
Sample size (n)	(1,000)	(1,164)	(205)	(2,377)	

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1988 HIFE Microdata, Statistics Canada.

NOTE: [1] Excluding renters in the Yukon and Northwest Territories.

general population, single person households and single parent families are over-represented in public housing. Other household types are under-represented.

Approximately one-half of all households residing in family projects are single parent families, roughly five times the proportion recorded among the renter population in general. Couples with children constitute the next largest group of households in family projects (28.5 per cent), followed by single person households (14.6 per cent). Seniors clients are predominantly single person households (85.6 per cent). Couples without children are the next largest group (12.9 per cent). The incidence of other household types is negligible.

The nature of household composition is reflected in the size distribution of client households. Just over 80 per cent of all client households are comprised of three or fewer persons, roughly the same proportion as in the general renter population. Less than 10 per cent of all client households are comprised of five or more persons. The large family households which constituted one of the principal client groups in the early years of the Public Housing Program are considerably less common today. Only one-fifth of family households have five or more persons. Over one-third of family households are composed of two persons or less.

Approximately 15.5 per cent of all client households reported that one or more members were disabled or infirm. The proportion of households with disabled or infirm members was more than twice as great among residents of seniors projects (21.7 per cent) as that recorded for family projects (9.0 per cent).

C. Socio-Economic Characteristics

Information concerning the educational and employment status of public housing clients is presented in Table 3.4. Almost one-half of survey respondents reported that they had not attended high school. Approximately 5 per cent indicated that they had not received any formal education. The "working poor" constitute only a small percentage of all client households. Fewer than one-fifth (18.7 per cent) of survey respondents reported having some kind of employment, whether full-time, part-time, or self employment (compared to 66.9 per cent in the renter population at large). Over sixty per cent of survey respondents indicated that they were either retired (48.2 per cent) or were unable to work due to disability (13.3 per cent). Approximately 7.2 per cent of respondents were unemployed and were currently looking for work. A similar proportion were not employed and were not seeking employment. In total, three-quarters of survey respondents were not in the labour force, compared to 28.5 per cent of the general renter population.

TABLE 3.4
SOCIO-ECONOMIC CHARACTERISTICS OF PUBLIC HOUSING RESIDENTS

	PER CENT OF PUBLIC HOUSING CLIENTS					PER CENT[1] OF ALL RENTER HOUSEHOLDS
CHARACTERISTICS	FAMILY PROJECTS	SENIORS PROJECTS	FAM/SEN PROJECTS	ALL PROJECTS		
EDUCATIONAL ACHIEVEMENT						
No formal schooling	4.8	5.6	7.3	5.3		N/A
Grade school	29.1	50.9	36.7	40.2		N/A
High school	44.7	33.1	46.8	39.3		N/A
Community college/CÉGEP	15.5	6.1	5.8	10.2		N/A
University	5.3	2.8	3.3	4.0		N/A
Other	0.6	1.5	0.1	1.0		N/A
Sample size (n)	(1,087)	(1,265)	(222)	(2,583)		
EMPLOYMENT STATUS						
Full-time employee	24.9	1.6	9.8	12.5	18.7	66.9
Part-time employee	8.7	1.8	5.6	5.2		
Self-employed	2.2	0.0	0.5	1.0		
Unemployed & looking for work	12.6	1.0	16.6	7.2		4.6
Not employed & not looking for work	12.4	2.9	13.8	7.9	74.1	28.5
Retired	11.4	83.8	35.2	48.2		
Unable to work due to disability	18.4	8.5	14.6	13.3		
Other	9.6	0.4	3.9	4.7		
Sample size (n)	(1,091)	(1,266)	(222)	(2,588)		(10,131)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1988 HIFE Microdata, Statistics Canada.

NOTE: [1] Excluding renters in the Yukon and Northwest Territories.

Over one-third (35.8 per cent) of family clients have employment of some kind (full-time, part-time or self employed); one-quarter are employed full-time. Just under one-third (29.8 per cent) are retired or unable to work due to disability. Approximately one-quarter of survey respondents in family projects reported being either unemployed and looking for work (12.6 per cent) or unemployed but not looking for work (12.4 per cent). The vast majority (83.8 per cent) of senior citizen respondents are retired and a further 8.5 per cent reported being unable to work due to disability.

Table 3.5 presents information pertaining to the source of income reported by survey respondents. Old Age Security (OAS) and the Guaranteed Income Supplement (GIS) were the most frequently cited major source of income (29.8 per cent). A similar proportion (30.4 per cent) of clients rely principally on either provincial (18.8 per cent) or municipal (11.6 per cent) social assistance. Closely matching the proportion of survey respondents who reported being employed (see Table 3.4), employment income was reported by 17.8 per cent of respondents to be their major source of income.

As would be expected, given the differences in employment status, income sources of public housing residents differ considerably from the general renter population. In 1988, 67.7 per cent of renter households reported that employment income was the major source of income, while 26.6 per cent cited government transfer payments and 2.3 per cent reported retirement pensions, superannuation and annuities.[1]

TABLE 3.5
PUBLIC HOUSING RESIDENTS BY SOURCE OF INCOME

SOURCE OF INCOME	**PER CENT MAJOR SOURCE OF INCOME**	**PER CENT PARTIAL SOURCE OF INCOME**
OAS or GIS	29.8	40.0
Provincial social assistance	18.8	20.3
Employment income	17.8	20.0
Canada or Quebec Pension Plan	11.8	36.1
Municipal social assistance	11.6	14.1
Worker's Compensation, Disability Allowance, Veteran Allowance & Income Supplement	2.8	6.4
Unemployment Insurance	2.6	5.6
Interest income	1.2	13.1
Private retirement pension	1.1	7.2
Other	2.5	6.2
Sample size (n)	(2,223)	(2,624)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Table 3.6 identifies the major source of income for different client groups. Just under one-half (48.2 per cent) of clients residing in family projects reported that provincial or municipal social assistance constitutes their major source of income. One-third of family clients report that employment was their major source of income. The majority of seniors clients (59.4 per cent) rely on Old Age Security benefits or the Guaranteed Income Supplement as their major source of income. Approximately 20.2 per cent of seniors reported that pensions (i.e. Canada/Quebec pension plans or private retirement pensions) were their major source of income.

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[1] 1988 HIFE Microdata, Statistics Canada. (Excluding renters in the Yukon and Northwest Territories).

TABLE 3.6
MAJOR SOURCE OF INCOME OF PUBLIC HOUSING RESIDENTS

	MAJOR SOURCE OF INCOME (PER CENT)					
CHARACTERISTICS	**EMPLOYMENT INCOME**	**SOCIAL ASSISTANCE**	**OAS/ GIS**	**PENSIONS**	**OTHER**	**SAMPLE SIZE (n)**
CLIENT TYPE						
Family	32.1	48.2	4.8	4.8	10.1	(1,017)
Senior	2.5	9.8	59.4	20.2	8.1	(994)
Family & Senior	16.4	39.0	13.1	23.0	8.5	(206)
HOUSEHOLD TYPE						
One person living alone	2.7	16.1	57.8	16.8	6.6	(984)
One adult with children	24.2	62.7	1.1	3.5	8.5	(549)
Couple with children	56.9	28.3	0.2	2.1	12.5	(303)
Couple without children	13.7	5.5	21.5	43.5	15.8	(171)
Other	29.2	29.6	15.9	8.9	16.4	(47)
PROVINCE/TERRITORY						
Newfoundland	30.8	33.3	7.0	6.0	22.9	(135)
Prince Edward Island	11.0	10.0	68.8	2.8	7.4	(149)
Nova Scotia	12.9	20.3	51.1	7.9	7.8	(144)
New Brunswick	8.9	50.5	29.2	7.0	4.4	(197)
Quebec	6.9	38.7	4.2	46.0	4.2	(390)
Ontario	18.1	32.2	35.2	4.6	9.9	(561)
Manitoba	15.7	34.2	33.9	6.6	9.6	(124)
Saskatchewan	20.8	10.1	50.9	9.1	9.1	(153)
Alberta	23.9	17.7	37.9	6.7	13.8	(142)
British Columbia	23.2	28.3	33.9	5.4	9.2	(180)
Yukon	-	-	-	-	-	(21)
Northwest Territories	-	-	-	-	-	(27)
ALL	17.8	30.4	29.8	12.9	9.1	(2,223)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and Northwest Territories.

Almost two-thirds of single-parent families rely on social assistance as their major source of income, while employment was the major source of income for the majority of families where two parents are present (56.9 per cent).

The highest incidence of employment being the major source of income was recorded in Newfoundland (30.8 per cent). Reliance on social assistance is highest in New Brunswick (50.5 per cent). Old Age Security and Guaranteed Income Supplement payments were the major source of income in Prince Edward Island (68.8 per cent), Nova Scotia (51.1 per cent) and Saskatchewan (50.9 per cent), a reflection of the dominance of senior citizen clients in those jurisdictions. Pensions (CPP/QPP and private retirement pensions) were infrequently reported to be the major source of income, with the exception of Quebec (46.0 per cent). The high incidence of "other" income sources reported in Newfoundland reflects the inclusion of UIC payments as the major source of information in the category "other" (ie. 18.9 per cent of clients in Newfoundland reported UIC as their major source of income).

Survey respondents reported annual household incomes which averaged $10,632. Annual household incomes are highly clustered within a narrow range (Table 3.7). Over one-half (55.9 per cent) of survey respondents reported incomes of between $5,000 and $10,000. Over 80 per cent reported household incomes of between $5,000 and $15,000. A small proportion (5.4 per cent) of client households reported annual incomes of $20,000 or more. Average incomes of households in family projects ($11,752) are only marginally higher than those residing in seniors projects ($9,799). Almost one-quarter of family households reported annual incomes of $15,000 or more, compared to only 7.6 per cent of seniors.

The average income of households residing in public housing is only 40 per cent of the average for renter households in general ($26,892). While 60.7 per cent of households residing in public housing have incomes of less than $10,000 per annum, only 18.2 per cent of all renter households were in this category.

TABLE 3.7
ANNUAL INCOMES OF HOUSEHOLDS RESIDING IN PUBLIC HOUSING (1988)

	PER CENT OF PUBLIC HOUSING CLIENTS				PER CENT OF ALL RENTER HOUSEHOLDS[1]
HOUSEHOLD INCOME GROUPS	**FAMILY PROJECTS**	**SENIORS PROJECTS**	**FAM/SEN PROJECTS**	**ALL PROJECTS**	
Under $5,000	4.4	5.1	5.4	4.8	3.6
$5,000 - $9,999	50.6	60.1	57.4	55.9	14.6
$10,000 - $14,999	22.2	27.2	27.4	25.1	14.2
$15,000 - $19,999	12.4	6.1	6.6	8.8	11.8
$20,000 or more	10.3	1.5	3.2	5.4	55.8
ALL	100.0	100.0	100.0	100.0	100.0
AVERAGE INCOME	$11,752	$9,799	$9,796	$10,632	$26,892
Sample size (n)	(1,000)	(1,255)	(221)	(2,480)	(10,128)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; 1988 HIFE Microdata, Statistics Canada.

NOTE: [1] Excluding renters in the Yukon and Northwest Territories.

Table 3.8 provides further data pertaining to household income. Only small provincial variations in average household incomes are apparent. Single person households and single parent families reported the lowest average incomes ($9,088 and $10,031, respectively). The average annual income of households for whom employment was the major source of income ($17,250) was well above the average for income from all sources ($10,632). Average incomes for the remaining households ranged from a low of $8,069 (where municipal social assistance was reported to be the major source of income) to $12,883 (for households whose major source of income was Workers' Compensation, disability allowances, or Veterans' Allowance and Income Supplements).

TABLE 3.8
AVERAGE INCOME OF CLIENT HOUSEHOLDS BY SELECTED CHARACTERISTICS

CHARACTERISTICS	AVERAGE INCOME	SAMPLE SIZE (n)
PROVINCE/TERRITORY		
Newfoundland	10,298	(147)
Prince Edward Island	9,964	(191)
Nova Scotia	10,103	(197)
New Brunswick	9,007	(186)
Quebec	9,594	(431)
Ontario	10,662	(604)
Manitoba	9,366	(129)
Saskatchewan	10,782	(188)
Alberta	10,792	(164)
British Columbia	10,955	(199)
Yukon	-	(21)
Northwest Territories	-	(23)
HOUSEHOLD TYPE		
One person living alone	9,088	(1,190)
One adult with children	10,031	(541)
Couple with children	15,343	(302)
Couple without children	14,284	(222)
Other	11,378	(51)
HOUSEHOLD SIZE		
One person	9,060	(1,243)
Two persons	11,224	(455)
Three persons	11,230	(291)
Four persons	12,434	(242)
Five or more persons	16,363	(170)
MAJOR SOURCE OF INCOME		
OAS or GIS	9,581	(645)
Provincial social assistance	8,158	(288)
Employment income	17,250	(347)
Canada or Quebec Pension Plan	9,349	(263)
Municipal social assistance	8,069	(301)
Workers' Compensation, Disability Allowance, Veterans' Allowance & Income Supplement	12,883	(48)
Unemployment Insurance	8,715	(57)
Private retirement pension	10,955	(33)
Other	11,022	(74)
ALL	10,632	(2,480)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and Northwest Territories.

D. Summary

This section has presented a profile of the characteristics of public housing residents based on data obtained through the survey of public housing tenants. The survey data reveal that the majority of public housing residents are either children under the age of fifteen years or senior citizens. These two groups account for one-half of all residents of public housing nationwide, as compared to one-third of the general population. Single person households predominate (52 per cent) among public housing clients, with the next largest group being single-parent families (24.1 per cent). Two-parent families comprise only 13.3 per cent of all households residing in public housing. One-half of family clients are single-parent families, while almost 90 per cent of senior citizen clients are one person households. Almost one-quarter of senior households have a disabled or infirm person present.

Almost half of all survey respondents indicated that they had not attended high school. Few respondents were employed (18.7 per cent). Fully 48.2 per cent were retired and a further 13.3 per cent were unable to work due to a disability. The average household income was $10,632 in 1988, compared to $26,892 for the renter population in general. Social assistance benefits are the major source of income for almost one-half of all family households. Only one-third of family clients rely principally on employment income. Old Age Security and Guaranteed Income Supplement payments are the major source of income for 59.4 per cent of all senior citizen clients.

IV OVERVIEW OF THE PHYSICAL CONDITION SURVEY

Subsequent chapters of this report focus on the physical condition of the public housing portfolio. The data presented in these chapters have been derived from the Physical Condition Survey. This chapter provides a brief overview of how these condition and cost data were collected.

A. Purpose of the Survey

The Physical Condition Survey was completed in 1988 as a major component of the evaluation. Over 1,000 public housing projects across Canada were inspected by CMHC inspectors in order to collect information on the physical condition of the public housing stock.

The purpose of the Physical Condition Survey was to answer the following questions put forward at the outset of the evaluation of the Public Housing Program:

- Does the program provide its clients with dwellings/ properties which are structurally sound and free of health and safety problems?
- What are the estimated costs for repairs and replacements?
- What are the estimated costs for additions and upgrades?

B. Description of the Inspection Procedures

The Physical Condition Survey was completed using new inspection forms and procedures developed by the Program Evaluation Division in consultation with Research Division, Professional Standards Division and field inspections staff. The challenge facing the evaluation team was to develop inspection procedures which would enable the collection of detailed information on repair and replacement needs and cost estimates across the diverse range of project types found in the public housing stock.

A total of seven inspection forms were developed as shown in Table 4.1. All the inspection forms, with the exception of one collecting basic project and building characteristics, were developed according to the same general format. This format, illustrated in Figure 4.2, involved a breakdown of the units, buildings or sites into elements and, if necessary, sub-elements for which the inspectors provided information on their type and, if appropriate, their need for repair or replacement actions, as well as the estimated cost, urgency and reason for these actions.

TABLE 4.1
EXAMPLES OF PROJECT TYPES AND APPLICABLE INSPECTION FORMS

	PROJECT/	HORIZONTALS/				
PROJECT TYPE	BUILDING CHAR (P-1)	SINGLES BUILDING (B-1)	SINGLES UNIT (B-2)	APART. BUILDING (C-1)	APART. UNITS (C-2)	SEPARATE/ ATTACHED[1] (PS-1)
Row housing only	1	1	*	-	-	-
High rise with separate parking structure	1	-	-	1	*	1
Mix of single-detached and row housing	1	2	*	-	-	-
Mix of row and low-rise housing	1	1	*	1	*	-
Mix of row, low-rise and high-rise housing	1	1	*	2	*	-
Mix of single-detached, row and low-rise housing	1	2	*	1	*	-

NOTE: * Multiple forms depending on number of buildings inspected and on size of project.

[1] PS-1 was used for separate parking structures.

In addition, the inspectors were asked to provide overall ratings on the condition of the units, buildings, sites and projects inspected. Figure 4.3 presents a sample question on condition ratings for buildings.

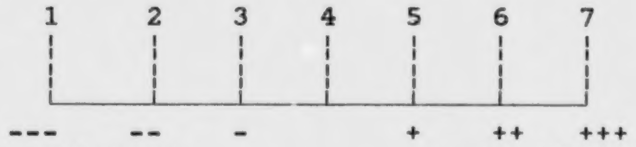
FIGURE 4.2
SAMPLE INSPECTION FORM

FOUNDATIONS

	COLUMN 1		COLUMN 2		COLUMN 3	COLUMN 4	COLUMN 5	COLUMN 6	COLUMN 7	COLUMN 8
				REPAIR/REPLACEMENT ACTIONS						
	ELEMENT: SUB-ELEMENT	CIRCLE	TYPE	CIRCLE	DESCRIPTION	QUANTITY MEASUREMENT	ESTIMATE OF COST $	URGENCY YEARS	REASON CODE	INSTRUCTIONS
1	FOUNDATIONS									
1.1	FOUNDATION WALLS	[✓ 1]	Reinforced concrete	1 2 3 0	Repair cracks Underpin wall Replace wall Other	m m m^2 - -				Cracking of concrete and concrete block foundation walls and beams may occur due to: - concentrations of stress at window openings; - differential settlement or heaving in some clay soils, due to extreme drying or saturation; -frost heaving, if the adjacent space is unheated. Moisture penetration may result from cracks, inadequate dampproofing or defective foundation drainage. Generally, cracks can be repaired satisfactorily, however, in severe cases of settlement, buckling or wall displacement it may be necessary to replace or underpin all or part of the foundation. In the case of severe problems to foundation walls for which repair/replacement actions are difficult to assess or cost indicate whether an engineering report is needed or has been completed. The inspectors should nevertheless attempt to provide an assessment of repair/replacement actions required, measurements and costs.
		2	Unreinforced concrete	1 2 3 0	Repair cracks Underpin wall Replace wall Other	m m m^2 - -				
		3	Concrete block	1 2 3 0	Repair cracks Underpin wall Replace wall Other	m m m^2 - -				
		0	Other	-	——	- -				
		8	None	-	——	- -	-	-	-	
		9	Engineering Report	1 2	Needed Completed	- - - -	- -	- -	- -	
	For Office Use Only									
	For Office Use Only									
1.2	GRADE BEAMS	1	Reinforced concrete	1 2 3 0	Repair cracks Underpin beam Replace beam Other	m m m - -				
		[✓ 8]	None	-	——	- -	-	-	-	
	For Office Use Only									
	For Office Use Only									

FIGURE 4.3
SAMPLE OF RATING QUESTIONS FROM PHYSICAL CONDITION SURVEY

HOW WOULD YOU RATE THE OVERALL CONDITION OF THIS BUILDING ON THE BASIS OF YOUR INSPECTION OF ITS EXTERIOR AND INTERIOR STRUCTURAL AND SURFACE CONDITIONS?



(BEYOND REPAIR, DEMOLISH) (TOP CONDITION)

WHERE A RATING OF 4 MEANS THAT OVERALL THE BUILDING MINIMALLY MEETS THE NHA MINIMUM PROPERTY STANDARDS FOR EXISTING RESIDENTIAL BUILDINGS.

Finally, information on needed additions and upgrades was also collected. For each project inspected, the inspectors were provided with a list of potential additions or upgrades for fire safety, lighting, ventilation, energy efficiency and durability/maintenance. The inspectors were asked to indicate whether these additions or upgrades were necessary because of current code requirements or would result in major cost savings.

C. Sampling and Weighting Procedures

In total, inspections were completed for a sample 1,001 public housing projects including 1,024 sites, 1,153 buildings and 2,483 dwelling units. A geographical breakdown of the sample is provided in Table 4.4.

The selection of the inspection sample involved three major steps. First, a sample of public housing projects had to be selected. To ensure that key characteristics of the portfolio were represented and that regional and provincial estimates can be obtained, the sample of projects was stratified by project size, project age, building type, region, client type and settlement size. Projects having characteristics of particular interest (e.g. older projects and high-rise buildings) were over-represented in the sample to ensure an adequate number of cases for subsequent analysis.

TABLE 4.4
PROJECTS, BUILDINGS AND UNITS IN THE SAMPLE, BY PROVINCE AND TERRITORY

PROVINCE/ TERRITORY	NUMBER OF PROJECTS	NUMBER OF BUILDINGS	NUMBER OF UNITS
Newfoundland	46	56	112
Prince Edward Island	39	43	55
Nova Scotia	79	87	178
New Brunswick	45	52	104
Quebec	180	228	457
Ontario	242	277	655
Manitoba	71	79	204
Saskatchewan	93	98	219
Alberta	83	90	223
British Columbia	60	79	183
Yukon	21	22	27
Northwest Territories	42	42	66
CANADA	1,001	1,153	2,483

Second, a sample of buildings was selected for each sampled project. One building was drawn in the sample for each type of building found in the project. As there are four major types of buildings (e.g. detached/semi-detached housing, row housing, low-rise housing and high-rise housing), the building sample for each project could therefore vary from 1 to 4 depending on the variety of buildings found in each project. Third, a sample of dwelling units was selected for each sampled project. The number of units inspected in each project varied from 1 to 8 depending on the number of buildings inspected and the total number of dwelling units in the project.

A final product of the sampling procedures was three sets of weights at the unit, building and project level to restore the samples to the actual population proportions. The sample was chosen in a scientific manner in that each project had a known probability of selection. Therefore, the results of the Physical Condition Survey can be projected and inferences can be made to the total population of public housing projects in Canada.

D. Data Collected in the Physical Condition Survey

Three major types of data relating to the condition of the public housing stock were collected during the Physical Condition Survey:

1. Repair and replacement needs and costs data.
2. Condition ratings data.
3. Additions and upgrades data.

1. Repair and Replacement Needs and Costs Data

For each element or sub-element to be inspected, the CMHC inspectors were asked to indicate each necessary repair or replacement action. For this purpose, the inspectors were provided with a list of the most common repair and replacement actions for each element or sub-element. The actions identified by the inspectors were then classified under one of the following categories:

1. Repair
2. Replace
3. Repair & Replace
4. Other

These actions involve the repair and replacement of existing elements and sub-elements. With the exception of a few additions relating to fire and safety code compliance, additions and upgrades to existing sites, buildings and units are dealt with in a separate section of the Physical Condition Survey.

The assessment of the need for repair or replacement action was made on the basis of the NHA Minimum Property Standards for Existing Residential Buildings.[1] The selection of Minimum Property Standards was undertaken in close consultation with CMHC research, technical and inspection staff. Furthermore, design guidelines for the Public Housing Program specified that existing buildings (for acquisitions) had to meet the Minimum Property Standards.

The Minimum Property Standards recognize that variations from the standards for new housing can be acceptable, except that in terms of health and safety a reasonable quality of structural soundness, fire protection, electrical, plumbing and heating systems, is mandatory. The Minimum Property Standards are permissive (i.e. the optional "should" appears instead of the mandatory "shall") and the recommended requirements should be met whenever it is practical to do so. Also, wherever municipal by-laws or provincial legislation require higher standards than the Minimum Property Standards, these higher standards govern.

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[1] National Housing Act: Minimum Property Standards for Existing Residential Buildings, Canada Mortgage and Housing Corporation, 1986.

The inspectors were instructed that replacement to meet local standards should not be automatically advocated if the element or system is still functional. Where replacement is necessary because the element or system is no longer functional, replacement should be undertaken based on the Minimum Property Standards (which refers to the National Building Code) or the locally established standard, whichever is higher. Data on the need for additions and upgrades to meet current code requirements (i.e. including local or provincial codes) were collected separately from the need for repairs and replacements to the public housing stock. These additions and upgrades were in one of the following areas: 1) fire safety; 2) lighting; 3) ventilation; 4) energy efficiency; 5) durability/maintenance.

The inspectors were also instructed that, where appropriate, repairs and replacements should be made to endure for at least 15 years. Finally, work in progress at the time of the survey was not included as a repair and replacement action.

Once the need for a repair or replacement action had been identified, the inspectors provided an estimate of the costs associated with each necessary repair or replacement action. For more complex construction systems, such as parking garages, the inspectors had the option to indicate whether an engineering report on the problem had been completed or was necessary. In total, they indicated that engineering reports were needed or had been completed for close to 50 projects in the sample.

In order to maximize the quality of cost data, these more complex problems were given closer examination by an engineering firm with extensive cost estimation experience (J.L. Richards, Ottawa). This firm was awarded a contract to contact CMHC inspectors and the concerned local housing authority officials, collect relevant information on the problems, and advise the evaluation team on new or revised cost estimates where necessary.

Finally, the inspectors provided urgency and reason ratings for each repair or replacement action required. Urgency ratings could vary from one to five years. Reason ratings were assigned according to one of the following codes:

Code	Reason
1	To address health and safety concerns
2	To restore structural soundness
3	To prevent health and safety problems or maintain structural soundness
4	Other reasons.

2. Condition Ratings Data

In addition to providing estimates of repair and replacement needs for individual construction systems, the CMHC inspectors were asked to answer summary rating questions on physical condition after completing their inspection.

a) Condition Ratings

Overall condition ratings were provided for each site, building and dwelling unit inspected as well as for the project as a whole. Their condition was rated on a seven-point scale ranging from "Beyond repair, demolish" (rating=1) to "Top condition" (rating=7) and where a rating of 4 means that the overall site, building, dwelling unit or project minimally meets the NHA Minimum Property Standards for Existing Residential Buildings.

b) Major/Minor Repair Question

For the purpose of comparability with previous studies of housing condition, an additional rating question on the need for major or minor repair was asked for each dwelling unit inspected. The question asked the inspector to assess whether the dwelling unit is in need of any repairs, where repairs do not include desirable remodelling, additions, conversions or energy improvements. To respond, the inspectors could choose one of the following three answers:

1. Yes, major repairs are needed. (To correct, for example corroded pipes, damaged electrical wiring, sagging floors, bulging walls, damp walls and ceilings, crumbling foundations, rotting porches or steps).

2. Yes, minor repairs are needed. (To correct, for example small cracks in interior walls and ceilings, broken light fixtures and switches, leaking sink, cracked or broken window panes, some missing shingles or siding, some peeling paint).

3. No, only regular maintenance is needed. (For example, painting, leaking faucets, clogged gutters or eavestroughs).

3. Additions and Upgrades Data

The final type of data collected in the Physical Condition Survey was on the incidence of the potential for additions or upgrades to public housing projects. These addition and upgrade actions would be above and beyond the repair and replacement actions to existing construction systems described above. The inspectors were provided with a list of potential additions and upgrades in the following five major areas:

1. Fire safety (e.g. add smoke or heat detectors, upgrade fire alarm system);

2. Lighting (e.g. add emergency lighting, upgrade site lighting);

3. Ventilation (e.g. add exhaust ventilation fans in dwelling units);

4. Energy Efficiency (e.g. reglaze existing windows with double glazing);

5. Durability/Maintenance (e.g. change inappropriate floor finishes in dwelling units).

The inspectors indicated whether any of these additions or upgrades were needed either to meet current code requirements or because they would likely result in major cost savings. In order to keep the inspection manageable and not to overburden the inspectors, only the incidence of the potential for additions or upgrades was collected.

The services of Scanada Consultants Limited were retained to develop cost estimates for each addition or upgrade on the list provided to the inspectors. Cost estimates were developed for each of the following typical building types:

1. single/semi-detached dwelling unit (per unit costs)
2. horizontal multiple dwelling unit (row housing) (per unit costs)
3. low-rise apartment building (three storeys)
4. high-rise apartment building (six storeys)
5. high-rise apartment building (ten storeys)

Efforts were made to identify where additions and upgrades were not mutually exclusive to avoid double-counting. The costs of the additions estimated directly by the inspectors were also identified to avoid double-counting between the cost estimates for repair and replacement and the cost for additions and upgrades.

These cost estimates were then linked to the incidence of additions and upgrades reported by the CMHC inspectors in order to develop national cost estimates for additions and upgrades.

E. Summary

The Physical Condition Survey represents the most comprehensive assessment of the condition of the public housing stock undertaken to date in Canada. The Physical Condition Survey was completed using new inspection forms and procedures developed by the Program Evaluation Division in consultation with Research Division, Professional Standards Division and field inspections staff. Over 1,000 public housing projects across Canada were inspected by CMHC personnel in order to complete this survey.

The Physical Condition Survey collected quantitative assessments of the condition of the stock. More importantly, the survey identifies those repair and replacement actions required to bring the stock up to Minimum Property Standards and provides the basis for the estimation of the total costs associated with these outstanding requirements. The Physical Condition Survey also estimates the costs for additions or upgrades to existing construction systems which are necessary to meet current code requirements or which would likely result in major cost savings.

V NATIONAL ESTIMATES OF THE CONDITION OF THE PUBLIC HOUSING PORTFOLIO

Prior to this survey, little information was available concerning the condition of the public housing portfolio in Canada. Despite the absence of accurate indicators of physical condition, negative publicity over the years has characterized public housing as being in a state of overall physical deterioration. More recently, the aging of the stock has prompted concerns over whether the program continues to provide housing that meets minimum standards. This chapter provides information, from the Physical Condition Survey, on the condition of the public housing portfolio and estimates of costs for repairs and replacements. Cost estimates are also provided for potential additions and upgrades to public housing projects.

A. Overall Condition Ratings

The Physical Condition Survey provides condition ratings against the NHA Minimum Property Standards for Existing Residential Buildings at the unit, building, site and overall project level as judged by CMHC inspectors. Overall condition ratings for projects, as assessed by project managers, are also available from the Survey of Public Housing Project Managers.

Each of these measures reflect favourably on the condition of the public housing portfolio in Canada. Perhaps the most significant finding in this respect is that 96.5 per cent of public housing projects, containing 93.7 per cent of all units in the portfolio, meet or exceed NHA Minimum Property Standards (Table 5.1).

Although the stock is generally in good condition, an estimate of 169 projects (3.5 per cent), containing close to 13,000 public housing units (6.3 per cent), fail to meet minimum property standards. In addition, more than half of all projects only minimally meet minimum property standards. These projects are at risk of falling below the standards.

TABLE 5.1
OVERALL CONDITION OF PROJECTS IN THE PUBLIC HOUSING PORTFOLIO
(n=997, N=4781)

NHA STANDARDS	# OF PROJECTS	%	# OF UNITS	%
Fails	169	3.5	12,994	6.3
Meets	2,525	52.9	106,620	51.7
Exceeds	2,087	43.6	86,537	42.0
TOTAL	4,781	100.0	206,151	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, 1988.

The condition of buildings, units (rating of the interior of the dwelling units) and sites are consistent with findings at the project level with 5.9 per cent of buildings, 4.0 per cent of units and 4.2 per cent of sites failing to meet minimum NHA standards (Table 5.2).

TABLE 5.2
OVERALL CONDITION OF BUILDINGS, UNITS AND SITES IN PUBLIC HOUSING PROJECTS

NHA STANDARDS	CONDITION OF BUILDINGS (%) (n=1141, N=23441)	CONDITION OF UNITS (%) (n=2461, N=204709)	CONDITION OF SITES (%) (n=824, N=3715)[1]
Fails	5.9	4.0	4.2
Meets	61.2	47.4	58.1
Exceeds	32.9	48.6	37.7
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

NOTE: [1] Condition ratings of sites were missing for 177 or 18 per cent of projects inspected.

B. Costs for Needed Repairs and Replacements

While condition ratings provide a good indication of the overall state of the public housing stock, estimates of the need for and cost of repairs and replacements provide a measure of the nature and magnitude of the corrective interventions required.

The total estimated cost of undertaking repair and replacement actions is just under $350 million (Table 5.3). This represents an average cost of $1,693 per unit in the public housing stock. Over half of the total cost is required to complete repair and replacement actions on buildings (as opposed to the interior of the dwelling units or the sites on which the buildings are located). Actions on buildings include all repairs and replacements to the building exterior, foundations, service rooms, parking garages and common areas (e.g. entrance halls, corridors, meeting rooms, staircases, etc.).

Repairs and replacements to the interior of the dwelling units account for 36.6 per cent of total costs while repairs and replacements to project sites (e.g. paving, landscaping, walls and fences) account for the remaining 7.9 per cent of total costs.

TABLE 5.3
TOTAL AND PER UNIT REPAIR COSTS FOR UNITS BUILDINGS AND SITES OF PUBLIC HOUSING PROJECTS

PROJECTS	TOTAL COST ($MILLIONS)	COST/UNIT ($)	%	N	(n)
Units	127.9	620	36.6	206,344	(2,483)
Buildings	193.9	939	55.5	23,880	(1,154)
Sites	27.5	133	7.9	987	(1,024)
ALL	349.3	1,693	100.0	4,793	(1,001)

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

A review of projects by cost categories indicates that the majority of projects do not require extensive repairs. Roughly one-half of all projects require less than $10,000 in repairs and replacements (Table 5.4). Together, these projects require less than 2 per cent of total repair and replacement costs. At the other extreme, a minority of projects require the majority of repair and replacement costs. While only 2.8 per cent of all projects (133) have repair and replacement costs exceeding $500,000, these projects account for over 50 per cent of all repair and replacement costs ($180 million).

TABLE 5.4
TOTAL PROJECT REPAIR AND REPLACEMENT COSTS PER PROJECT
(n=1001, N=4793)

R&R COSTS PER PROJECT	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	% OF PROJECTS	% OF UNITS
Less than 2,500	0.61	0.2	29.7	19.3
2,500 - 4,999	1.49	0.4	8.1	4.4
5,000 - 9,999	3.41	1.0	9.8	4.5
10,000 - 24,999	15.62	4.5	19.8	13.7
25,000 - 49,999	20.18	5.8	11.3	11.7
50,000 - 99,999	24.13	6.9	7.3	7.9
100,000 - 249,999	60.90	17.4	8.6	14.5
250,000 - 499,999	42.85	12.3	2.6	8.6
500,000 or more	180.09	51.5	2.8	15.4
TOTAL	349.28	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Measured in terms of repair and replacement costs per unit, almost one-half of public housing projects require less than $500 per unit. These projects, (Table 5.5) which include 45.3 per cent of all public housing units, require only 3.6 per cent of total repair and replacement costs. At the other extreme, a small percentage of projects (6.9 per cent), require $5,000 or more per unit and account for 44 per cent of total repair and replacement costs.

TABLE 5.5
TOTAL PROJECT REPAIR AND REPLACEMENT COSTS PER UNIT
(n=1001, N=4793)

R&R COSTS PER UNIT	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	% OF PROJECTS	% OF UNITS
Less than 500	12.67	3.6	47.0	45.3
500 - 999	18.37	5.3	14.5	12.2
1,000 - 2,499	82.87	23.7	22.8	24.0
2,500 - 4,999	81.65	23.4	8.8	11.0
5,000 or more	153.72	44.0	6.9	7.5
TOTAL	349.28	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

C. Costs for Additions and Upgrades

The Physical Condition Survey collected information on the potential for additions and upgrades to the public housing stock in the areas of fire safety, lighting, ventilation, energy efficiency and durability/maintenance. These additions and upgrades are either necessary to meet current code requirements or would result in major cost savings in the opinion of the CMHC inspectors.

Table 5.6 presents the costs for each category of addition and upgrade studied in the Physical Condition Survey. In total, $133.4 million are required to complete these additions and upgrades. Additions and upgrades for energy efficiency make up the largest category with $54.8 million and 41.1 per cent of the total costs for additions and upgrades. Additions and upgrades for fire safety items follow with $35.0 million and 26.3 per cent of the total costs. Finally, additions and upgrades for ventilation, lighting and durability/maintenance items follow with respectively 19.5 per cent, 8.7 per cent and 4.5 per cent of the total costs.

TABLE 5.6
COST OF ADDITIONS AND UPGRADES TO THE PUBLIC HOUSING STOCK
(n=1001, N=4793)

CATEGORY OF ADDITION OR UPGRADE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS
Fire safety	35.0	26.3
Lighting	11.6	8.7
Ventilation	26.0	19.5
Energy efficiency	54.8	41.1
Durability/ Maintenance	6.0	4.5
TOTAL	133.4	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 5.7 presents a breakdown of the individual additions and upgrades which account for the bulk of the costs for additions and upgrades. These 12 additions and upgrades, out of a total of 53, account for $111 million or 83 per cent of the total cost for additions and upgrades.

A more detailed breakdown of costs for each individual addition and upgrade can be found in Appendix B.

TABLE 5.7
COST OF ADDITIONS AND UPGRADES TO THE PUBLIC HOUSING STOCK
(n=1001, N=4793)

ADDITION OR UPGRADE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS
Add exhaust ventilation fans in dwelling units	17.3	12.9
Add insulation to flat roofs	15.4	11.5
Install sprinkler systems	13.2	9.9
Reglaze existing windows with double glazing	11.7	8.7
Add lighting fixtures in dwelling	10.2	7.7
Add insulation to basement walls (heated areas)	9.7	7.3
Add smoke detectors	8.0	6.0
Add insulation to basement walls	7.1	5.4
Add roof ventilation	7.1	5.3
Upgrade doors in dwelling units/fire-separation walls	7.0	5.2
Change inappropriate floor finishes in dwelling units	4.6	3.5
SUB-TOTAL	111.3	83.4
Other	22.1	16.6
TOTAL	133.4	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

D. Repair and Replacement Costs by Project Condition Ratings

This section compares repair and replacement costs by condition ratings. This comparison of these two different measures of project condition supports the validity of their assessment of the physical state of the public housing portfolio. In addition, it provides information on the difference in repair and replacement needs between projects, buildings, units and sites in poor and good condition.

The results of the comparison at the project level, presented in Table 5.8, show that, while they account for only 3.5 per cent of all projects, public housing projects which fail to meet NHA Minimum Property Standards account for close to a quarter (22 per cent) of all repair and replacement costs. In fact, projects which fail the NHA standards have repair and replacement costs per unit equal to more than three times the national average, while projects which exceed the NHA standards have repair and replacement costs per unit equal to less than half the national average. In absolute terms, projects which minimally meet the NHA standards require the bulk of total repair and replacement expenditures with just under 60 per cent of total costs.

TABLE 5.8
TOTAL REPAIR AND REPLACEMENT COSTS
BY PROJECT CONDITION RATINGS
(n=997, N=4781)

NHA STANDARDS	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL PROJECTS
Fails	76.0	21.8	49,376	5,851	3.5
Meets	204.5	58.6	80,995	1,918	52.9
Exceeds	68.5	19.6	32,812	791	43.6
ALL	349.0	100.0	73,108	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 5.9 presents the comparison between repair and replacement costs and condition ratings at the building level. Buildings which fail the NHA standards represent 6.0 per cent of all buildings, but account for over a quarter of building repair and replacement costs. At close to $35,000 per building, they require more than seven times the amount of repairs and replacements required for buildings exceeding the NHA standards. The bulk of total building repair and replacement expenditures (56.0 per cent), however, are needed for buildings which just meet the NHA standards.

TABLE 5.9
BUILDING REPAIR AND REPLACEMENT COSTS BY BUILDING CONDITION RATINGS
(n=1141, N=23441)

NHA STANDARDS	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER BUILDING	% OF TOTAL BUILDINGS
Fails	49.0	25.2	34,978	6.0
Meets	108.2	56.0	7,559	61.2
Exceeds	36.4	18.8	4,728	32.8
ALL	193.6	100.0	8,259	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 5.10 compares repair and replacement costs and condition ratings at the unit level. Units failing the NHA standards, which represents 4.0 per cent of all units, account for close to 20 per cent of all unit repair and replacement costs. At just over $3,000 per unit, these units require repair and replacement expenditures which are more than twelve times higher than the expenditures required on units exceeding the NHA standards. As was the case with projects and buildings, the bulk of repair and replacement expenditures (61.2 per cent) are needed for units which just meet the NHA standards.

TABLE 5.10
UNIT REPAIR AND REPLACEMENT COSTS BY UNIT CONDITION RATINGS
(n=2468, N=204709)

NHA STANDARDS	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
Fails	25.1	19.6	3,061	4.0
Meets	78.5	61.2	810	47.4
Exceeds	24.6	19.2	247	48.6
ALL	128.2	100.0	626	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Finally, Table 5.11 presents a comparison of repair and replacement costs and condition ratings at the site level. Sites which fail the NHA standards require by far the highest level of repair and replacement costs per site ($23,760). Again, the bulk of site repair and replacement expenditures (76.9 per cent) are needed for sites which just meet the NHA standards.

TABLE 5.11
SITE REPAIR AND REPLACEMENT COSTS BY SITE CONDITION RATINGS
(n=824, missing=177, N=3715)

NHA STANDARDS	**TOTAL COSTS ($MILLIONS)**	**% OF TOTAL COSTS**	**AVERAGE COSTS PER SITE**	**% OF TOTAL SITES**
Fails	3.7	14.6	23,760	4.2
Meets	19.5	76.9	9,042	58.1
Exceeds	2.2	8.5	1,550	37.7
ALL	25.4	100.0	5,744	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

E. Repair and Replacement Costs by Construction Systems

Repair and replacement costs can also be examined in terms of which construction systems are in need of attention. Individual construction systems which require in excess of $5 million for repairs and replacements are identified in Table 5.12. Collectively, these systems account for 88.3 per cent of total costs.

Among the construction systems identified, five require in excess of $25 million for repair and replacement actions. These are, in order of descending magnitude: surface finishes ($62.9 million), exterior walls ($38.7 million), roofs and ancillary features ($38.7 million), parking garages ($26.9 million) and windows ($26.1 million). Together, these five construction systems account for 55.3 per cent of all repair and replacement costs.

TABLE 5.12
TOTAL REPAIR COSTS FOR PUBLIC HOUSING PROJECTS BY CONSTRUCTION SYSTEMS
(n=1001, N=4793)

CONSTRUCTION SYSTEM	TOTAL COST ($MILLIONS)	(%)
Surface finishes	62.9	18.1
Exterior walls	38.7	11.1
Roofs and ancillary features	38.7	11.0
Parking garages	26.9	7.7
Windows	26.1	7.4
Exterior doors	17.0	4.9
Appliances	13.8	3.9
Cabinets, shelves, specialties	12.0	3.4
Ventilation and exhaust systems	10.8	3.1
Communal areas	10.7	3.1
Heating and air conditioning	9.2	2.6
Paved areas	8.9	2.5
Interior doors	7.9	2.3
Balconies and canopies	7.6	2.2
Communications/protective systems	6.8	1.9
Plumbing service	5.7	1.6
Plumbing fixtures	5.2	1.5
SUB-TOTAL	308.9	88.3
Others	40.4	11.7
TOTAL	349.3	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

F. Urgency and Reason for Repair and Replacement Needs

As noted in the previous sections, the Physical Condition Survey indicates that just under $350 million in repair and replacement actions are necessary to restore or maintain the public housing stock to NHA Minimum Property Standards. Not all repair and replacement actions are of equal urgency or priority. To assist in the identification of priority areas, the inspectors provided an assessment of the relative urgency of the repair and replacement actions as well as the reason for these actions.

The results of this assessment (Table 5.13) indicate that $278 million or 79.4 per cent of all repair and replacement costs are required within 3 years. The decline in repair and replacement costs in years 4 and 5 can be understood as these costs only reflect the repair and replacement actions which were necessary at the time of the inspections. Not included in this assessment are repairs and replacements in years 2 through 5 for systems which become substandard after the inspection has taken place.

TABLE 5.13
TOTAL REPAIR COSTS FOR
PUBLIC HOUSING PROJECTS, BY URGENCY CODE
(n=1001, N=4793)

URGENCY (YEAR)	**TOTAL COSTS ($MILLIONS)**	**%**
1	141.6	40.5
2	90.8	26.0
3	45.2	12.9
4	16.9	4.9
5	32.3	9.3
Missing Codes	22.5	6.4
TOTAL	349.3	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

G. Immediate Health and Safety Hazards

A minority of the repair and replacement actions recommended to address health and safety concerns involved conditions which pose an immediate threat to health and safety. Such conditions were the subject of a special procedure initiated by the Program Evaluation Division while the Physical Condition Survey was in progress.

The inspectors conducting the Physical Condition Survey were requested to immediately (on-site) advise the housing authority officials and then notify Program Evaluation Division by electronic mail if any immediate fire, health or safety hazards were detected. On receipt of the inspector's reports, the appropriate provincial agency, local housing authority, or other officials responsible for the administration of the projects in question were immediately informed of the situation by the Program Evaluation Division. It was made clear to these officials that the inspectors' visit to their project did not constitute a compliance inspection and that, since not all buildings and units were inspected, other immediate fire, health or safety hazards may remain undetected.

In total, immediate fire, health and safety hazards were reported in 20 public housing projects across Canada. This represents 2 per cent of the sample of projects selected for inspection. Examples of reported hazards include a suspected gas leak in a gas meter, the lack of a protective cover for an electrical panel box and insufficient clearance between chimney flues and combustible materials. Follow-up with the provinces confirmed that all necessary actions had been taken to correct the identified fire, health and safety hazards.

H. Summary

This chapter presented national estimates of the condition of the public housing portfolio. It provided information from the Physical Condition Survey on the condition of the public housing portfolio, estimates of costs for repair and replacement to bring the stock up to minimum property standards, and estimates of costs for potential additions and upgrades to public housing projects.

The public housing portfolio is generally in good condition with 96.5 per cent of public housing projects, containing 93.7 per cent of all units in the portfolio, meeting or exceeding NHA Minimum Property Standards. On the other hand, an estimate of 169 projects (3.5 per cent), including close to 13,000 units (6.3 per cent), fail to meet minimum property standards. In addition, more than half of all projects only minimally meet minimum property standards. These projects may be at risk of falling below the standards.

The total estimated cost to undertake repairs and replacements is just under $350 million, representing an average cost of $1,693 per unit in the public housing stock. A small percentage of projects (6.9 per cent), which require $5,000 or more per unit, account for 44 per cent of total repair and replacement costs.

Just over $133 million is required to complete additions and upgrades to the public housing stock in the areas of fire safety, lighting, ventilation, energy efficiency and durability/ maintenance. These additions and upgrades either are necessary to meet current code requirements or would result in major cost savings.

The comparison of project condition ratings and repair and replacement costs supports the validity of their assessment of the physical condition of the public housing portfolio. Projects which fail the NHA Minimum Property Standards (3.5 per cent) account for close to a quarter (22 per cent) of all repair and replacement costs. Projects which minimally meet the NHA standards (52.9 per cent) require the bulk of repair and replacement costs with close to 60 per cent of total costs.

Five construction systems in the public housing stock require in excess of $25 million and account for 55.3 per cent of all repair and replacement costs. These are: surface finishes ($62.9 million), exterior walls ($38.7 million), roofs and ancillary features ($38.7 million), parking garages ($26.9 million) and windows ($26.1 million). Of all repair and replacement costs, $278 million or 79.4 per cent are required within three years.

VI FACTORS INFLUENCING THE CONDITION OF THE PORTFOLIO

Chapter V has demonstrated that the public housing stock is in good condition overall. This chapter takes a closer look at the cost and condition data. Repair and replacement costs and condition ratings are presented first by key variables and then by province or territory. Major factors influencing project condition are identified in this chapter.

A. Repair and Replacement Costs and Condition Ratings by Key Variables

Project Age

It was expected that repair and replacement costs would increase with the age of the stock. As Table 6.1 indicates, this appears to be true as average repair and replacement costs per unit decrease from over $3,000 for projects completed before 1970 to just under $2,000 for projects completed between 1970 and 1974, and finally to under $1,000 for projects completed after 1974. Public housing projects completed before 1970 require 29 per cent of all repair and replacement expenditures although they represent only 14.0 per cent of all public housing units. The bulk of the expenditures (44.4 per cent) are however needed in projects completed between 1970 and 1974 which include 39.5 per cent of all public housing units.

TABLE 6.1
TOTAL REPAIR AND REPLACEMENT COSTS BY PROJECT AGE
(n=1001, N=4793)

PROJECT AGE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
Pre-1964	29.0	8.3	317,619	3,233	4.4
1964-1969	72.4	20.7	199,647	3,646	9.6
1970-1974	155.0	44.4	116,559	1,900	39.5
1975-1979	69.0	19.8	38,739	976	34.3
1980-1987	23.8	6.8	19,412	946	12.2
ALL	349.3	100.0	72,872	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Tables 6.2 and 6.3 present the number and percentage of projects by age and condition ratings. In absolute terms, the bulk of projects which fail or minimally meet the NHA standards were committed between 1970 and 1979. Approximately three quarters of the 169 projects failing and 2,526 projects minimally meeting the NHA standards were committed during the 1970's. In relative terms, the incidence of projects failing the NHA standards was 5 per cent or above for projects committed prior to 1975. Projects committed since 1975 had the lowest incidence of failure.

TABLE 6.2
PROJECT CONDITION RATINGS BY PROJECT AGE
(NUMBER OF PROJECTS)
(n=997, N=4781)

NHA STANDARDS	PRE-1964 # OF PROJECTS	1964-69 # OF PROJECTS	1970-74 # OF PROJECTS	1975-79 # OF PROJECTS	1980-87 # OF PROJECTS	TOTAL
Fails	8	18	82	44	17	169
Meets	48	133	861	998	486	2,526
Exceeds	36	208	386	734	723	2,086
TOTAL	91	359	1,329	1,776	1,226	4,781

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 6.3
PROJECT CONDITION RATINGS BY PROJECT AGE
(PERCENTAGE OF PROJECTS)
(n=997, N=4781)

NHA STANDARDS	PRE-1964 % OF PROJECTS	1964-69 % OF PROJECTS	1970-74 % OF PROJECTS	1975-79 % OF PROJECTS	1980-87 % OF PROJECTS
Fails	7.8	5.0	6.2	2.5	1.4
Meets	47.1	37.0	64.8	56.2	39.6
Exceeds	45.1	57.9	29.0	41.3	59.0
TOTAL	100.0	100.0	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Tables 6.4 and 6.5 present the number and percentage of units by project age and project condition ratings. In absolute terms, the bulk of the units in projects failing the NHA standards (just under 60 per cent) are also in projects committed in the 1970's. Projects committed before 1970, which account for 15 per cent of failing projects, because of larger project size account for close to 40 per cent of units located in failing projects.

TABLE 6.4
PROJECT CONDITION RATINGS BY PROJECT AGE
(NUMBER OF UNITS IN PROJECTS)
(n=997, N=4781)

NHA STANDARDS	PRE-1964 # OF UNITS	1964-69 # OF UNITS	1970-74 # OF UNITS	1975-79 # OF UNITS	1980-87 # OF UNITS	TOTAL
Fails	1,909	3,087	5,627	1,969	401	12,993
Meet	5,395	12,407	46,797	33,089	8,933	106,621
Exceeds	1,674	4,218	29,148	35,659	15,838	86,537
TOTAL	8,978	19,712	81,572	70,717	25,172	206,151

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

The data presented in Table 6.5 confirms that a strong relationship exists between project age and project condition. Results are expressed in terms of the percentage of units located in projects failing, meeting or exceeding the NHA standards, and account for variations in the size of project. Projects committed prior to 1970 also have the highest incidence of units located in projects failing the NHA standards with 21.3 per cent for projects committed prior to 1964 and 15.7 per cent for projects committed between 1964 and 1969. Projects committed between 1970 and 1974 have a much lower incidence of units located in failing projects (less than 7 per cent). Finally, projects committed after 1974 have the lowest incidence of units located in failing projects (less than 3 per cent).

TABLE 6.5
PROJECT CONDITION RATINGS BY PROJECT AGE
(PERCENTAGE OF UNITS IN PROJECTS)
(N=997, n=4781)

NHA STANDARDS	PRE-1964 % OF UNITS	1964-69 % OF UNITS	1970-74 % OF UNITS	1975-79 % OF UNITS	1980-87 % OF UNITS
Fails	21.3	15.7	6.9	2.8	1.6
Meets	60.1	62.9	57.4	46.8	35.5
Exceeds	18.6	21.4	35.7	50.4	62.9
TOTAL	100.0	100.0	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Type of Client

As Table 6.6 indicates, projects serving family clients require repair and replacement expenditures more than one and a half times the national average (per unit) and close to three times that for projects serving senior clients only. As a whole, public housing projects serving family clients or a mix of senior and family clients require close to 75 per cent of all repair and replacement expenditures while they represent just under 50 per cent of all public housing units.

TABLE 6.6
TOTAL REPAIR AND REPLACEMENT COSTS BY CLIENT TYPE
(N=1001, n=4793)

TYPE OF CLIENTS	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
Family	228.8	65.5	99,820	2,676	41.5
Senior	95.9	27.5	42,044	916	50.9
Family/ Senior	24.2	6.9	121,917	1,544	7.6
Other	0.4	0.1	-	-	-
ALL	349.3	100.0	72,872	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

The family and senior public housing stocks vary in their age profile. Because the age of projects is the main factor apart from client group which is strongly related to the condition of the stock, Table 6.7 presents repair and replacement costs per unit by client type controlling for age group. It shows that, for each age category where costs can be estimated for both family and seniors projects, family projects have repair and replacement costs well above that of seniors projects.

TABLE 6.7
REPAIR AND REPLACEMENT COSTS PER UNIT
BY PROJECT AGE AND CLIENT TYPE
(n=918, N=4573)

PROJECT AGE	**TYPE OF CLIENT**	
	FAMILY	**SENIOR**
Pre-1964	3,479	-
1964-1969	3,998	*
1970-1974	2,319	1,333
1975-1979	1,971	717
1980-1987	2,574	403
ALL	2,676	916

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

NOTE: * Indicates cells where there were not enough cases to estimate repair and replacement costs (minimum n was set at 30).

Repair and replacement costs per unit standardize costs for projects of different size in terms of number of units. This measure is satisfactory in most comparisons or analysis. Family and senior clients, however, are likely to live in dwelling units of different sizes. Senior clients are more likely to live in smaller bachelor and one-bedroom units, while family clients will live in units with one or more bedrooms. Since buildings with larger units will require higher repair and replacement costs at the unit level and to a certain extent at the building level (ie. due to larger construction systems for the same number of units), repair and replacement costs per unit may over emphasize differences in the physical condition of the family public housing stock versus the seniors stock.

Table 6.8 presents repair and replacement cost data standardized for the number of bedrooms in each project. These costs per "standardized unit" do not measure with precision the impact of combinations of units of different size within public housing projects; they may in fact exaggerate the impact of unit size on costs. They are however a useful tool for establishing whether the higher per unit costs for family versus seniors projects are due in part to larger unit sizes for family projects.

The data indicate that cost per standardized unit generally increases as projects age for both family and seniors projects. Controlling for project age, costs per standardized unit remain consistently higher for family projects than for seniors projects. The difference between family and seniors projects however diminishes as projects age. Most importantly for this analysis, the difference between family and seniors projects is smaller for costs per standardized unit than per non-standardized unit. As mentioned above, this analysis does not establish the magnitude of the difference in costs per unit between family and seniors projects which is due to differences in the size of units for family and senior clients. It does, however, establish that larger unit sizes for family clients, while they do not account for all the difference in costs between the two client types, do indeed contribute to higher costs per unit for family clients than for senior clients.

TABLE 6.8
PROJECT REPAIR AND REPLACEMENT COSTS
PER UNIT AND STANDARDIZED UNIT
BY PROJECT AGE AND CLIENT TYPE
(n=904 N=4550)

	FAMILY		SENIOR	
PROJECT AGE	COST PER UNIT	COST PER STD UNIT	COST PER UNIT	COST PER STD UNIT
Pre-1964	3,479	1,443	-	-
1964-1969	4,004	1,706	*	*
1970-1974	2,317	1,038	1,341	976
1975-1979	1,979	826	721	503
1980-1987	2,579	1,104	403	268
ALL	2,693	1,164	919	668

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

NOTE: Standardized units were computed according to the following ratios based on Maximum Unit Sizes for social housing apartment buildings;
Studio=1.00, 1-bedroom=1.51, 2-bedroom=2.00, 3-bedroom=2.51, 4-bedroom=3.00, 5-bedroom=3.5.
* Indicates cells where there were not enough cases to estimate repair and replacement costs (minimum n was set at 30).

In order to verify further the impact of unit sizes on family and senior repair and replacement costs, the same analysis was repeated for unit repair and replacement costs (ie. for repairs and replacement to the interior of dwelling units). Results of this analysis are presented in Table 6.9. The results confirm the relationships established in Table 6.8 for project-level costs. Unit repair and replacement costs per standardized unit increase with age for both family and seniors projects. Controlling for project age, costs per standardized unit are consistently higher for family projects than for seniors projects. Again, the difference between family and seniors projects decreases as projects age. Finally, the difference between family and seniors projects is also smaller for costs per standardized unit than per non-standardized unit. This analysis, which was limited to unit-level costs directly affected by variations in unit size, provides further evidence that larger unit sizes for family clients contribute to higher costs per unit than for senior clients.

TABLE 6.9
UNIT REPAIR AND REPLACEMENT COSTS PER UNIT AND STANDARDIZED UNIT BY PROJECT AGE AND CLIENT TYPE
(n=904, N=4550)

	FAMILY		SENIOR	
PROJECT AGE	COST PER UNIT	COST PER STD UNIT	COST PER UNIT	COST PER STD UNIT
Pre-1964	1,436	595	-	-
1964-1969	1,530	652	*	*
1970-1974	767	344	440	320
1975-1979	772	322	274	191
1980-1987	807	345	106	70
ALL	966	419	334	238

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC 1988.

NOTE: Standardized units were computed according to the following ratios based on Maximum Unit Sizes for social housing apartment buildings:
Studio=1.00, 1-bedroom=1.51, 2-bedroom=2.00, 3-bedroom=2.51, 4-bedroom=3.00, 5-bedroom=3.5.

* Indicates cells where there were not enough cases to estimate repair and replacement costs (minimum n was set at 30).

Tables 6.10 and 6.11 present the number and percentage of projects and of units located in these projects by type of client and their condition ratings. They clearly indicate that by any measure of project condition, family projects are in worse condition than seniors projects. Family projects have an incidence of failing NHA standards of more than double that of seniors projects; in terms of units in projects the failure rate is 5 times greater for families. Furthermore, over 60 per cent of family projects only minimally meet NHA standards, leaving just under one-third of family projects which exceed NHA standards. In comparison, close to 60 per cent of seniors projects exceed NHA standards.

TABLE 6.10
PROJECT CONDITION BY CLIENT TYPE
(NUMBER AND PERCENTAGE OF PROJECTS)
(n=992, N=4759)

	FAMILY		SENIOR		FAMILY/SENIOR	
NHA STANDARDS	**# OF PROJECTS**	**%**	**# OF PROJECTS**	**%**	**# OF PROJECTS**	**%**
Fails	120	5.3	43	1.9	6	3.0
Meets	1,453	63.7	879	38.5	175	88.4
Exceeds	708	31.0	1,358	59.6	17	8.6
TOTAL	2,282	100.0	2,280	100.0	198	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 6.11
PROJECT CONDITION BY CLIENT TYPE
(NUMBER AND PERCENTAGE OF UNITS IN PROJECTS)
(n=992, N=4759)

	FAMILY		SENIOR		FAMILY/SENIOR	
NHA STANDARDS	**# OF UNITS**	**%**	**# OF UNITS**	**%**	**# OF UNITS**	**%**
Fails	9,899	11.6	2,264	2.2	1,831	5.3
Meets	58,147	68.1	34,852	33.3	13,251	84.6
Exceeds	17,281	20.3	67,537	64.5	1,580	10.1
TOTAL	76,327	100.0	104,653	100.0	15,662	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 6.12 presents average project repair and replacement costs per unit by client type and project condition ratings.

As expected, needed repair and replacement expenditures increase as project condition worsens. For all condition ratings, family projects consistently require higher levels of expenditures for repair and replacement than seniors projects.

TABLE 6.12
REPAIR AND REPLACEMENT COSTS PER UNIT BY CLIENT TYPE AND PROJECT CONDITION RATINGS
(n=914, N=4561)

NHA STANDARDS	FAMILY AVG COST PER UNIT	SENIOR AVG COST PER UNIT
Fails	6,768	2,610
Meets	2,464	1,238
Exceeds	1,060	693
ALL	2,676	916

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Project Type

As was previously discussed, the public housing stock is quite diverse in its built form, ranging from single-detached housing to projects with a mix of building types including high rises. Table 6.13 presents repair and replacement costs by the type of building mix found in public housing projects. Overall, projects composed of either low-rise or high-rise buildings (i.e. apartment buildings) have the lowest repair and replacement costs per unit at just over $1,200. At almost $2,200 per unit project repair and replacement costs for single, semi-detached or row housing have the next highest costs per unit. Projects with a mix of building types, including or excluding high rises, have the highest repair and replacement costs per unit with close to $2,500 and $2,900 per unit respectively. It should be noted, however, that projects with a mix of building types are older than average with 67 per cent of all projects completed before 1975, and almost all of them (98 per cent) are serving a family or family/senior clientele.

TABLE 6.13
TOTAL REPAIR AND REPLACEMENT COSTS BY PROJECT TYPE
(n=1001, N=4793)

PROJECT TYPE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
Detached, Semi & Row	119.8	34.3	46,005	2,198	26.4
Low rise	60.3	17.3	40,650	1,260	23.2
High rise	91.7	26.3	177,278	1,226	36.3
Mixed (no high rise)	37.5	10.7	305,489	2,864	6.3
Mixed (with high rise)	39.9	11.4	622,995	2,484	7.8
TOTAL	349.3	100.0	72,872	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Tables 6.14 and 6.15 present the number and percentage of projects and of units located in these projects by building type and project condition ratings. Both measures indicate that again projects with mixed building types are in worse condition followed by projects composed of detached, semi-detached or row housing. Apartment buildings, low rises or high rises, are by far in the best condition with more than 50 per cent of their projects and units exceeding NHA standards.

TABLE 6.14
PROJECT CONDITION BY PROJECT TYPE
(NUMBER AND PERCENTAGE OF PROJECTS)
(n=997, N=4781)

NHA STAN-DARDS	DETACHED, SEMI & ROW		LOW RISE		HIGH RISE		MIXED W/O HIGH RISE		MIXED W/ HIGH RISE	
	# OF PROJ.	%	# OF PROJ.	%	# OF PROJ.	%	# OF PROJ.	%	# OF PROJ.	%
Fails	87	3.4	43	2.9	18	3.5	10	8.5	10	15.7
Meets	1,484	57.2	680	45.9	220	42.5	99	80.8	42	65.6
Exceeds	1,022	39.4	760	51.2	280	54.0	13	10.7	12	18.7
TOTAL	2,593	100.0	1,483	100.0	518	100.0	122	100.0	64	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 6.15
PROJECT CONDITION BY PROJECT TYPE
(NUMBER AND PERCENTAGE OF UNITS IN PROJECTS)
(n=997, N=4781)

NHA STAN-DARDS	DETACHED, SEMI & ROW		LOW RISE		HIGH RISE		MIXED W/O HIGH RISE		MIXED W/ HIGH RISE	
	# OF UNITS	%	# OF UNITS	%	# OF UNITS	%	# OF UNITS	%	# OF UNITS	%
Fails	3512	6.5	1644	3.4	3086	4.1	1796	13.7	2956	18.4
Meets	35584	65.5	20631	43.1	29555	39.5	10221	78.0	10629	66.2
Exceeds	15238	28.0	25574	53.4	42178	56.4	1082	8.3	2466	15.4
TOTAL	54334	100.0	47849	100.0	74819	100.0	13099	100.0	16051	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Program

Public housing was delivered solely under one program, Section 79, until 1964 when a second delivery program, Section 81/82, was introduced. Table 6.16 presents repair and replacement costs for each program. Section 79 projects, which include all those completed prior to 1964, have a higher average repair and replacement cost per unit than Section 81/82 projects. These latter projects, which include close to four-fifths of all units, account for three-quarters of all repair and replacement costs.

TABLE 6.16
TOTAL REPAIR AND REPLACEMENT COSTS BY PROGRAM
(n=1001, N=4793)

PROGRAM	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
Section 79	85.0	24.3	59,074	2,050	20.1
Section 81/82	264.3	75.7	78,789	1,603	79.9
ALL	349.3	100.0	72,872	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Tables 6.17 and 6.18 present the number of projects and of units located in these projects by program and project condition ratings. Section 79 projects would appear to be in better condition if measured in terms of the number of projects meeting or exceeding NHA standards. If measured as a percentage of all units delivered under each program, Section 79 projects are in worse condition with 11.8 per cent of all units located in projects failing the NHA standards compared to 4.9 per cent for Section 81/82 projects.

TABLE 6.17
PROJECT CONDITION BY PROGRAM
(NUMBER AND PERCENTAGE OF PROJECTS)
(n=997, N=4781)

NHA STANDARDS	SECTION 79 # OF PROJECTS	SECTION 79 %	SECTION 81/82 # OF PROJECTS	SECTION 81/82 %
Fails	37	2.6	132	3.9
Meets	657	45.9	1,869	55.8
Exceeds	738	51.5	1,348	40.3
TOTAL	1,432	100.0	3,349	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC 1988.

TABLE 6.18
PROJECT CONDITION BY PROGRAM
(NUMBER AND PERCENTAGE OF UNITS IN PROJECTS)
(n=997, N=4781)

NHA STANDARDS	SECTION 79 # OF UNITS	SECTION 79 %	SECTION 81/82 # OF UNITS	SECTION 81/82 %
Fails	4,882	11.8	8,112	4.9
Meets	18,286	44.1	88,334	53.6
Exceeds	18,251	44.1	68,286	41.4
TOTAL	41,419	100.0	164,732	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Project Size

Public housing projects also vary greatly in terms of size, ranging from less than 10 units to more than one thousand.

Table 6.19 presents repair and replacement costs for different sizes of projects. There is no significant difference in repair and replacement costs per unit relative to project size, except for larger projects with 200 or more units. It should be noted that 80 per cent of the units in these larger projects were completed prior to 1975 and that these larger projects are on average older than projects of any other size.

TABLE 6.19
TOTAL REPAIR AND REPLACEMENT COSTS BY PROJECT SIZE
(n=1001, N=4793)

PROJECT SIZE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
< 10 units	8.4	2.4	8,179	1,416	2.9
10-49 units	85.7	24.5	32,098	1,470	28.2
50-99 units	46.9	13.4	86,317	1,244	18.3
100-199 units	84.5	24.2	232,911	1,651	24.8
200 units or more	123.6	35.5	740,371	2,326	25.8
ALL	349.3	100.0	72,872	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Tables 6.20 and 6.21 present the number and percentage of projects and of units located in these projects by project size and project condition ratings. Again, larger projects with 200 units or more are in worse condition than smaller projects.

TABLE 6.20
PROJECT CONDITION BY PROJECT SIZE
(NUMBER AND PERCENTAGE OF PROJECTS)
(n=997, N=4781)

NHA STAND-ARDS	<10 UNITS # OF PROJ.	%	10-49 UNITS # OF PROJ.	%	50-99 UNITS # OF PROJ.	%	100 - 199 UNITS # OF PROJ.	%	> 200 UNITS # OF PROJ.	%
Fails	2	0.2	102	3.8	29	5.3	17	4.6	19	11.4
Meets	498	48.5	1,445	54.2	306	56.2	207	55.0	69	41.3
Exceeds	528	51.3	1,118	42.0	209	38.5	153	40.4	79	47.3
TOTAL	1,028	100.0	2,665	100.0	544	100.0	377	100.0	167	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 6.21
PROJECT CONDITION BY PROJECT SIZE
(NUMBER AND PERCENTAGE OF UNITS IN PROJECTS)
(n=997, N=4781)

NHA STAND-ARDS	<10 UNITS # OF PROJ.	%	10-49 UNITS # OF PROJ.	%	50-99 UNITS # OF PROJ.	%	100 - 199 UNITS # OF PROJ.	%	> 200 UNITS # OF PROJ.	%
Fails	15	0.2	2268	3.9	1876	5.0	2623	5.1	6212	11.7
Meets	3022	51.0	30536	52.5	22266	59.0	28011	54.7	22785	42.9
Exceed	2899	48.8	25323	43.6	13590	36.0	20561	40.1	24164	45.4
TOTAL	5936	100.0	58127	100.0	37732	100.0	51195	100.0	53161	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Settlement Size

Public housing projects are dispersed across rural and urban Canada in settlements or municipalities of all sizes. As indicated in Table 6.22, there does not appear, with the exception of rural areas, to be any significant pattern in repair and replacement costs per unit across settlement sizes. Rural areas, with 80 per cent of their stock of public housing units completed since 1975, have the youngest stock and also cater to a higher percentage of senior clients (55.6 per cent) than the national average (45 per cent).

TABLE 6.22
TOTAL REPAIR AND REPLACEMENT COSTS BY SETTLEMENT SIZE
(n=1001, N=4793)

MUNICIPALITY SIZE	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT
Rural	14.6	4.2	10,963	920
2,500 to 9,999	31.3	9.0	32,878	1,632
10,000 to 29,999	40.1	11.5	45,252	1,553
30,000 to 99,999	62.1	17.8	69,056	1,795
100,000 to 499,999	103.2	29.4	207,427	1,781
500,000 or more	98.0	28.1	179,802	1,850
ALL	349.3	100.0	78,272	1,693

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

B. Factors Influencing the Condition of the Portfolio

So far, this chapter has identified trends in the physical condition of the public housing stock. Further statistical analysis was conducted to test the existence and strength of relationships between the various project characteristics, as well as other variables, and the project condition ratings provided by the CMHC inspectors. More specifically, measures of association and logistic regression modelling were used in this analysis; detailed results can be found in Appendix C.

Evidence presented so far in this chapter points toward treating family and senior public housing as two separate programs. Tests were therefore conducted to examine whether the patterns of association with project condition for all public housing projects vary between family and seniors projects.

The analysis confirmed that a significant general association exists between both client type[1] and project age and the condition of public housing projects. In fact, project age and client type have the strongest relationship with project condition of all descriptive variables of public housing projects tested (i.e. client type, project age, program, building type, project size and settlement size).

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[1] Project with mixed client types (i.e. families and seniors) were included with family projects for the purpose of this analysis.

A clear relationship exists showing better project condition for seniors projects than for other types of client groups. At the same time, project condition worsens as projects get older. The relationship between project age and project condition remains strong when controlling for seniors projects, but is weaker for family projects.

The statistical tests also indicated that project condition is also generally associated with the types of buildings found in public housing projects. Several combinations of building types were examined to clearly identify the relationship with project condition.

First, although low-rise or high-rise apartment buildings require lower repair and replacement costs per unit than other building types, overall only a very weak relationship exists between apartment buildings and better project condition. For family projects, apartment buildings are in slightly better condition than detached/semi-detached or row housing. On the other hand, no relationship was found for seniors projects. The relationship identified overall may therefore be attributed to the great number of low-rise and high-rise apartment buildings which house senior clients and, because of this, are in better condition. A logistic regression model of project condition did not find a variable representing apartment buildings to be significant when controlling for client type and project age.

On the other hand, statistical analysis indicated that projects composed of a mix of building types, whether with or without high-rise buildings, were in worse condition than in any other types of projects. These projects almost exclusively serve family clients and are older and larger than average; all factors associated with poor project condition. Nonetheless, logistic regression modelling confirmed a relationship between projects with mixed building types and project condition when controlling for client type and project age. It remains unclear, however, whether the association with worse project condition is related to the mix of building types, the number of units or the original design of these projects.

Statistical tests also identified a weak relationship between large projects (200 units or more) and project condition ratings. However, drastically different relationships with project condition were identified for family versus seniors projects. Statistical tests identified strong relationships between better project condition and large projects for seniors projects, and on the other hand, between poorer project condition and large project size for family projects.

Tests of association with project condition were also conducted for the average annual maintenance and modernization & improvement (M&I) expenditures per unit between 1979 and

1986, under the hypothesis that deteriorating project condition will be associated with increasing maintenance and M&I expenditures. Chi-square tests indicated general associations between both variables and project condition. A strong relationship was found between higher maintenance costs per unit and poorer project condition. On the other hand, a much weaker relationship exists between project condition and M&I expenditures per unit. Therefore, the physical condition of the stock in 1988 does not appear to be strongly associated with the level of M&I expenditures recorded in the preceding eight years. In fact, the very weak relationship established previously disappears when controlling for client type, most likely because M&I costs per unit are higher for family projects than for seniors projects irrespective of project condition. Projects with higher maintenance costs continue to be associated with worse project condition when controlling for the type of client served.

Finally, a weak relationship was identified between worse project condition and the location of public housing projects in municipalities with a population of 500,000 or more. General association between location in these municipalities and worse project condition remains when controlling for family projects, but disappears for seniors projects.

The above analysis refers to the results from logistic regression analysis on project condition. Overall, a model including client type, project age, an indicator of projects with mixed building type, maintenance expenditures per unit, and M&I expenditures per unit as independent variables, explained the most variation in condition ratings of public housing projects.

C. Repair and Replacement Costs and Condition Ratings by Province

Project Condition Ratings

The physical condition of units can be expected to vary across provinces and territories. Characteristics of the provincial/territorial public housing portfolios differ and can affect their condition, particularly the client type and age profile of the stock. Management of public housing projects also rests completely with the provincial/territorial governments and their agents. As anticipated, project condition ratings vary considerably by province and territory, as shown in Tables 6.23 and 6.24.

TABLE 6.23
PROJECT CONDITION BY PROVINCE AND TERRITORY
(NUMBER AND PERCENTAGE OF PROJECTS)
(n=997, N=4781)

PROVINCE/ TERRITORY	NHA STANDARDS			
	FAILS %	MEETS %	EXCEEDS %	TOTAL %
Newfoundland	5.1	52.3	42.6	100.0
P.E.I.	3.4	56.2	40.4	100.0
Nova Scotia	10.7	54.8	34.5	100.0
New Brunswick	9.5	66.9	23.6	100.0
Quebec	7.0	70.1	22.9	100.0
Ontario	1.3	32.1	66.6	100.0
Manitoba	0.9	84.2	14.9	100.0
Saskatchewan	-	30.8	69.2	100.0
Alberta	2.1	76.8	21.1	100.0
B.C.	6.1	70.7	23.2	100.0
Yukon	4.8	80.9	14.3	100.0
N.W.T.	2.4	53.9	43.7	100.0
CANADA	3.5	52.9	43.6	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

In general terms, the condition of the public housing stock is the worst in Nova Scotia, New Brunswick and Newfoundland. Nova Scotia and New Brunswick both have around 10 per cent of their public housing projects failing NHA standards. It should be noted that these failing projects include 31 per cent and 23 per cent of all public housing units in Nova Scotia and New Brunswick (Table 6.24). In Newfoundland, although only 5 per cent of projects fail the NHA standards, these projects include more than 13 per cent of all public housing units in that province.

At the other end of the spectrum, the condition of the stock is best in Manitoba and Saskatchewan measured either as the percentage of projects failing standards or as the percentage of public housing units located in projects failing the NHA standards.

Another important measure of the condition of the public housing stock is the percentage of the stock which just meets the minimum NHA standards and may be in danger of falling below these standards if proper maintenance is not adhered to or if necessary repair and replacements are not given proper attention. The public housing stocks of the Yukon, Alberta, Quebec, Manitoba, British Columbia and New Brunswick had the highest incidence of projects or units in projects just meeting the NHA standards at the time of the survey.

TABLE 6.24
PROJECT CONDITION BY PROVINCE AND TERRITORY
(NUMBER AND PERCENTAGE OF UNITS IN PROJECTS)
(n=997, N=4781)

PROVINCE/ TERRITORY	FAILS %	NHA STANDARDS MEETS %	EXCEEDS %	TOTAL %
Newfoundland	13.5	48.8	37.7	100.0
P.E.I.	4.5	58.4	37.1	100.0
Nova Scotia	30.9	39.9	29.2	100.0
New Brunswick	23.2	62.3	14.5	100.0
Quebec	4.5	75.7	19.8	100.0
Ontario	5.0	37.2	57.8	100.0
Manitoba	2.2	76.3	21.5	100.0
Saskatchewan	-	27.7	72.3	100.0
Alberta	4.4	80.3	15.3	100.0
British Columbia	7.0	62.5	30.5	100.0
Yukon	2.7	86.1	11.2	100.0
N.W.T.	3.6	55.6	40.8	100.0
CANADA	6.3	51.7	42.0	100.0

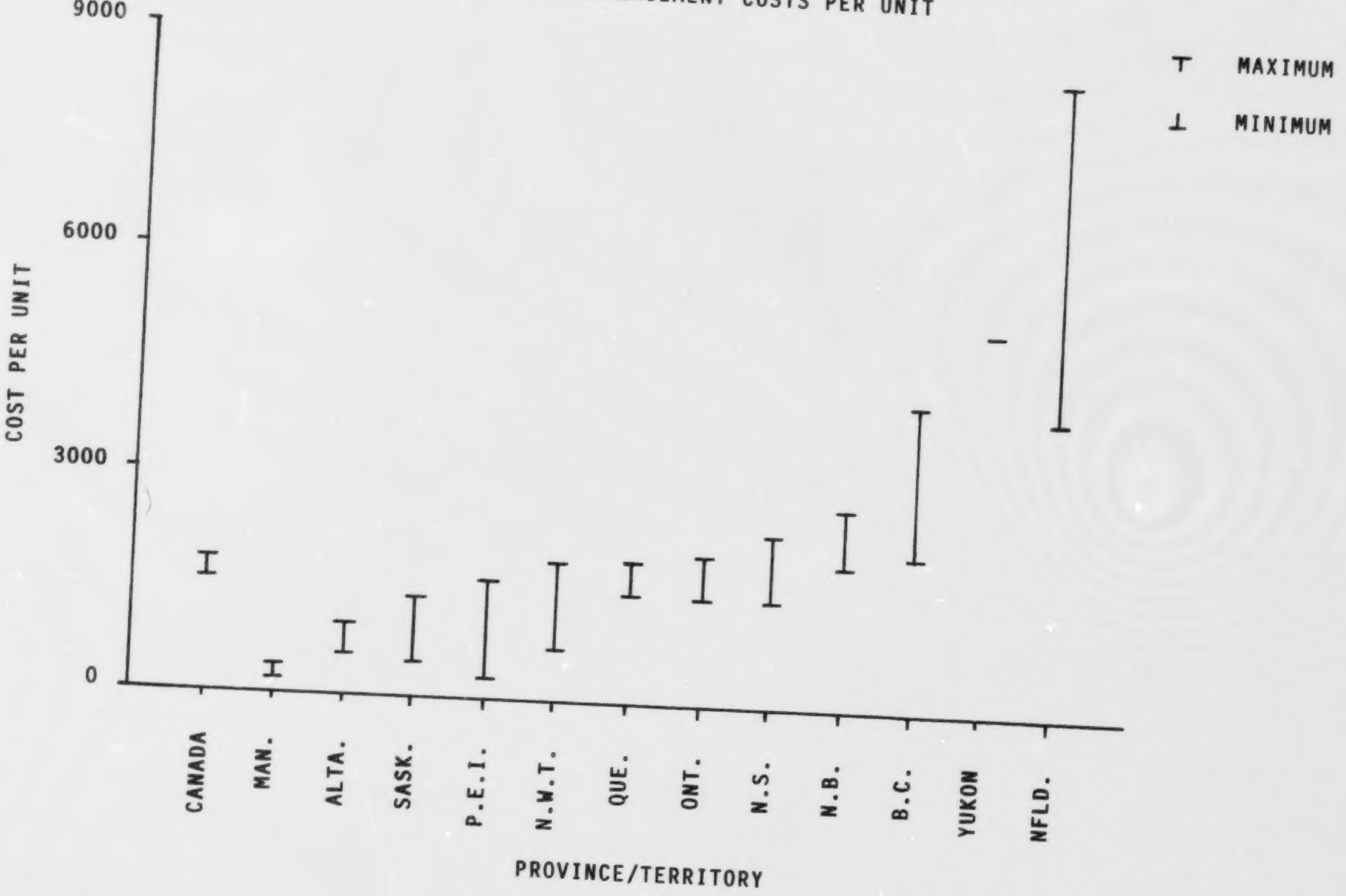
SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 6.25 presents repair and replacement costs by province or territory. The cost estimates produced from the Physical Condition Survey are accurate within a certain range. Because of the number of projects inspected and the variation in costs within each province or territory, the range of accuracy of the cost estimates will vary from one province to another.

These ranges, also called confidence intervals, are presented in Figure 6.1. In short, the fewer the number of projects inspected and the greater the variation in repair and replacement costs, the wider the confidence interval will be for that province or territory. A more complete list of these confidence intervals can be found in Appendix D.

Confidence intervals prevent us from drawing conclusions where the cost estimates do not provide sufficient evidence to do so. For example, Nova Scotia, with an average repair and replacement cost per unit of $1,903, would appear to be higher than Quebec or Ontario at under $1,800 per unit. A closer look at the confidence intervals however indicates that the

FIGURE 6.1
CONFIDENCE INTERVALS
REPAIR AND REPLACEMENT COSTS PER UNIT



"accuracy range" of the estimates for these three provinces overlap and that, therefore, their estimates of repair and replacement costs per unit cannot be found to be significantly different.

The condition ratings provided by the CMHC inspectors provide further evidence to confirm or clarify relationships that cannot firmly be established using repair and replacement costs alone.

TABLE 6.25
TOTAL REPAIR AND REPLACEMENT COSTS BY PROVINCE AND TERRITORY
(n=1001, N=4793)

PROVINCE/ TERRITORY	TOTAL COSTS ($MILLIONS)	% OF TOTAL COSTS	AVERAGE COSTS PER PROJECT	AVERAGE COSTS PER UNIT	% OF TOTAL UNITS
Newfoundland	29.6	8.5	168,442	6,325	2.3
P.E.I.	0.9	0.3	10,274	942	0.5
Nova Scotia	19.7	5.6	41,507	1,903	5.0
New Brunswick	9.8	2.8	62,154	2,339	2.0
Quebec	61.6	17.6	97,573	1,731	17.2
Ontario	167.9	48.2	126,545	1,762	46.3
Manitoba	3.6	1.0	10,785	274	6.4
Saskatchewan	11.6	3.3	20,084	891	6.3
Alberta	12.7	3.6	24,038	741	8.3
B.C.	26.4	7.5	263,726	3,158	4.0
Yukon	1.3	0.4	63,885	5,180	0.1
N.W.T	4.2	1.2	11,149	1,287	1.6
CANADA	349.3	100.0	72,872	1,693	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Three provinces and one territory have repair and replacement costs per unit which are significantly higher than the national average of $1,693 per unit. These are Newfoundland with $6,325 per unit, the Yukon with $5,180 per unit, British Columbia with $3,158 per unit, and New Brunswick with $2,339 per unit.

On the other hand, three provinces have repair and replacement costs per unit which are significantly lower than the national average. These provinces are Manitoba with $274 per unit, Alberta with $741 per unit, and Saskatchewan with $891 per unit. Prince Edward Island and Northwest Territories would also appear to have repair and replacement costs per unit which fall below the national average.

Quebec, Ontario and Nova Scotia all have repair and replacement costs per unit which are not significantly different from the national average.

In absolute terms, Quebec and Ontario, due to the size of their portfolios, have the highest estimated costs for repair and replacements with $61.6 million and $167.9 million respectively. These costs account respectively for 17.6 per cent and 48.2 per cent of the total national costs, which for both provinces is representative of their respective share of units in the national public housing stock. Newfoundland and British Columbia, two of the provinces with higher than average repair and replacement costs per unit, together account for another 16 per cent of total national costs.

D. Summary

This chapter examined factors influencing the condition of the public housing stock. As expected, repair and replacement costs per unit increase with the age of the stock. However, the bulk of repair and replacement expenditures (44.4 per cent) are needed in projects completed between 1970 and 1974. Similarly, condition ratings of the stock reflect deteriorating condition as the stock gets older. However, again the bulk of the units located in projects failing the NHA Minimum Property Standards for Existing Residential Buildings were completed between 1970 and 1979.

Both physical condition ratings and requirements for repairs and replacements are strongly related to the type of clients served. Projects serving family clients or a mix of family and senior clients required close to 75 per cent of all repair and replacement costs while they represent just under half of all public housing units. Family projects continue to require higher repair and replacement costs per unit than seniors projects when controlling for the age of projects. To some extent, the larger size of the units in family projects contribute to higher costs per unit than for senior clients.

Project condition ratings confirm that, by any measure of condition, family projects are in worse condition than seniors projects. The bulk of family projects only meet the NHA standards while the bulk of seniors projects exceed the standards. Finally, given the same condition rating, family projects require higher repair and replacement costs than seniors projects.

The condition of public housing projects also varies according to the type of buildings in the projects. Projects composed of low-rise or high-rise apartment buildings are in the best condition and require the lowest repair and replacement costs per unit. On the other hand, projects composed of a mix of buildings types are in the worst condition and require the highest repair and replacement costs per unit. These latter projects are older and larger than average and serve almost exclusively family clients.

Although public housing projects vary greatly in size, no significant difference in repair and replacement costs per unit exists by project size with the exception of projects with more than 200 units. These projects are in poorer condition and require higher expenditures. Again, these projects are older on average than projects of any other size.

Finally, there does not appear, with the exception of projects located in rural areas, to be any significant difference in repair and replacement requirements per unit according to settlement size. Rural projects are younger than average and serve a higher percentage of senior clients than the national average.

Statistical analysis confirmed a strong overall relationship between the age of projects, the type of clients served and the condition of public housing projects. When controlling for the type of client served, larger projects were identified with better physical condition in the case of seniors projects, but were identified with poorer condition in the case of family projects. Finally, a strong relationship was identified between poorer project condition and higher levels of maintenance expenditures per unit over the preceding eight years.

This chapter also examined project condition and repair and replacement costs by province and territory. As anticipated, project condition ratings vary considerably by province and territory. In general terms, the condition of the public housing stock is the worst in Nova Scotia, New Brunswick and Newfoundland. At the other end of the spectrum, the condition of the stock is best in Manitoba and Saskatchewan. Finally, the public housing stock of the Yukon, Alberta, Quebec, British Columbia, Manitoba and New Brunswick have the highest incidence of projects just meeting the NHA standards and at risk of falling below these standards.

Three provinces and one territory have repair and replacement requirements per unit which are significantly higher than the national average. These are Newfoundland, the Yukon, British Columbia and New Brunswick. On the other hand, Manitoba, Alberta and Saskatchewan have repair and replacement requirements per unit which are significantly lower than average. Prince Edward Island and the Northwest Territories also appear to have requirements per unit which fall below the national average. Finally, Quebec, Ontario and Nova Scotia all have requirements per unit which are not significantly different from the national average.

In absolute terms, Quebec and Ontario have the highest requirements for repairs and replacements with $61.6 million and $167.9 million or 17.6 per cent and 48.2 per cent of the total national costs for repairs and replacements, respectively. Newfoundland and British Columbia together account for another 16 per cent of total national costs.

VII NEED FOR MODIFICATION OF THE PUBLIC HOUSING STOCK: CONVERSIONS, REDESIGN, REDEVELOPMENT

A. Introduction

Previous chapters have dealt with the condition and repair/replace costs of the portfolio as a whole. This chapter addresses another dimension of "the state of the public housing stock" issue and focusses on a sub-set of projects requiring conversion, redesign and redevelopment. Such actions potentially represent major modifications to public housing projects and can incur large costs. Prior to the evaluation, little was known about the potential for conversion, redesign and redevelopment in the public housing stock as a whole and their associated financial implications.

This chapter briefly discusses the background to the regeneration debate and introduces a case study approach to examine the implications of various conversion, redesign and redevelopment strategies. The chapter also presents an estimate of the potential for conversion, redesign and redevelopment within the public housing stock and dimensions the associated financial implications.

B. Background

A request for meeting space from a tenants' association led to the major redesign and redevelopment of the Regent Court public housing project in Regina in 1984. This became known as the first public housing regeneration project in Canada. Another regeneration project was started in 1986, the Uniacke Square project in Halifax. This latter project is still in progress.

With the regeneration of these projects, there has been a heightened interest at the provincial government level to see other projects receive similar attention. This led to requests for CMHC to fund conversion, redesign and/or redevelopment projects under the Public Housing Program. In addition, in 1986, Federal and Provincial Housing Ministers identified "the proper maintenance, preservation and overall management of the existing social housing stock, particularly the public housing stock, as a major priority".

As a part of this latter initiative, the Federal/Provincial/Territorial Sub-Committee on the Existing Housing Stock established a Task Force to develop options for the "regeneration" of the public housing stock. It was the hope of some Task Force members that their work would result in a special program to address the needs of projects requiring major modification.

In the absence of a clear picture of the physical condition of the stock, as well as the number of projects requiring major work, no decision on regeneration could be made. Agreement was reached with the provinces, that regeneration would be considered following the completion of the Public Housing Evaluation, and in the context of a policy review for the Public Housing Program as a whole.

C. Definitions of Conversion, Redesign and Redevelopment

Regeneration is the term usually used to describe the major modification of a public housing project. The CMHC team responsible for the Regent Court and Uniacke Square projects thought of regeneration as a process and specifically defined regeneration as "the process whereby the issues associated with the impact of the aging process on housing are most prudently addressed, a decision making process that will ensure that the kind of improvements that are made to older housing projects will result in maximum benefits to both the tenants and the Partnership at the most reasonable costs".

The F/P/T Task Force on regeneration defined it as both a condition and an activity and defined some broad parameters. Their definition stated that "regeneration is the physical upgrading of public housing projects which are physically and/or functionally obsolete. Regeneration is distinct from other types of repair work, such as ordinary maintenance or modernization and improvement (M&I), in that it is comprehensive and deferrable. It is comprehensive because it involves the redevelopment, redesign and rejuvenation of a project as a whole rather than individual components. It is deferrable because there are no immediate repercussions to postponement of regeneration activities, at least for a limited time. Ordinary maintenance cannot be postponed without short term repercussions".

Since regeneration is an all encompassing term which has come to be associated with a wide range of interventions which can address the upgrading of the public housing stock, the casual use of the term in this report may stimulate more questions than it answers. For this reason, this chapter initially addresses three sub-components of the broader definition which are easier to define, conceptualize and measure: conversion, redesign and redevelopment.

Conversion is an upgrading activity which results in a net increase in the number of units in a building to produce more smaller units or a net decrease in the number of units in a building so that fewer larger units can be accommodated. Conversion can also occur where a change in unit layout is considered desirable. Conversion is generally required where a mismatch exists between the size of units available, and the household size and composition of potential clients.

Redesign and redevelopment, on the other hand, refer to a range of actions which go beyond the repair and replacement of existing construction systems or even the addition or upgrading of particular systems. Redesign and redevelopment may be warranted for projects where the original design was poor or has become obsolete, where sites could be redeveloped to a higher and better use, or where the physical condition is so poor and repair/replacement costs are so high that an overall strategy for salvaging the project may be warranted. Finally, redesign and redevelopment may be a useful solution where changes in communities, either urban or rural, challenge the viability of the project.

D. Study Approach

Two data sources were utilized to assist in the examination of conversion, redesign and redevelopment. Case studies, the principal data source, were conducted in eight public housing projects identified in the survey of project managers as having a conversion, redesign and/or redevelopment need. In addition to a need for conversion, redesign and redevelopment, other criteria were used to select projects for the case studies, including project manager and/or inspector "fail" condition ratings, high repair and replacement costs and high annual operating costs. Projects were further selected to be representative of a range of project characteristics such as project size and type, client type and settlement size.

The case studies involved the collection of background information on each project. This included data from other data bases created for the evaluation, as well as project specific site plans and information. An on-site visit and interviews with project staff and tenants, where feasible, were undertaken. A group of technical experts in the field of social housing administration reviewed the results of the case studies prior to their finalization. The case studies were contracted out to the firm of Barry Padolsky Architects Ltd.

The second source of information, the survey of public housing project managers, provides data on the incidence of the potential for conversion, redesign and redevelopment within the public housing stock. This survey, which was sent to all project managers in Canada and achieved a response rate of over 85 per cent, asked project managers to identify conversion, redesign and redevelopment needs of their projects using the definition outlined above.

E. Conversion

Projects under the Public Housing Program were initially targeted to large families and an independent seniors population. However, the client group is changing to include smaller families, including single-parent families, singles and "old" seniors. Expectations have also changed making bachelor units for seniors less desirable and hence more difficult to rent.

Two of the case studies indicated a need for conversion, both from small units into larger units. Conversion has the advantage of adapting available units to the needs of the current clients; however, there are disadvantages to conversion. Many conversions are from smaller units to larger ones (approximately one-third of projects indicating a need for conversions included combining small units into larger ones) and would therefore result in a net decrease in the number of units available. Conversion from bachelor units to one bedroom units, for example, would halve the number of available units.

In addition, both the case studies and findings from the F/P/T Sub-Committee on the Existing Housing Stock indicate that conversion is expensive. In one of the cases studied, the estimated direct cost for conversion from bachelors to one bedroom units was $20,000 per unit. Although conversion is very expensive, it would be more justifiable where unit condition is also poor.

Physical conversion may actually be the solution of last resort, since other options may be more practical. Existing units could be matched with a more appropriate clientele. For example, bachelor units might be suitable for non-elderly singles or could be adapted to serve as an intermediate nursing care facility for seniors.

F. Redesign

Redesign responds to community, project management or tenant concerns that the physical design of the building(s) and/or site, lead to the clear identification of the project as a form of subsidized housing. As a result, both project management and tenants believe they are being stigmatized by the surrounding community. Another concern involves the layout of a project site, including circulation patterns. In some projects, the absence of vehicular access has resulted in poor policing practices and security. This can result in opportunities for vandalism, violence and drug use and trafficking. In other projects, vehicular access has been too great dividing a project in two, thus breaking down the cohesiveness of the project.

The case studies found that a change in site layout would be beneficial in one project. Changes in site layout would also apply to projects where the demolition and/or construction of new units or other structures were cited as options. However, the case studies concluded that the benefits of site redesign, to "open up" projects to public streets in an attempt to address social problems, would only outweigh the significant costs involved in limited circumstances.

The case studies found that renovations were needed in six projects, providing an opportunity to improve the image or appearance of the projects. This could contribute to improving community attitudes toward the project.

G. Redevelopment

Redevelopment addresses the need for more fundamental changes to the physical structure of a project. A particular building type within a project or a particular group of units may have outlived their usefulness, leading to a need for demolition. Increased demand for social housing may encourage project management to pursue opportunities linked to surpluses of land. The end result could be the removal of exterior parking spaces for infill housing or the sale of a land parcel for construction of other forms of social housing. The addition of recreational or social service facilities may be important additions, having an impact on the social and physical health of the project.

Redevelopment opportunities, identified in 5 of the 8 projects studied, were the addition of residential and/or non-residential spaces or uses. These interventions would take advantage of available unused space, often parking areas or garages, to increase the number of units, improve the quality of the units provided, generate revenues, provide community space and facilities and/or provide greater services.

The addition of new buildings or units was cited in 5 of the projects studied, while the demolition of buildings or units was cited in 4 projects. Redevelopment in some projects would combine the demolition and the addition of units.

The case studies identified a need for community centres or facilities in three projects. These projects were all large projects housing families. The most acute need for recreational and community facilities was found in a large high-rise project. The project, composed of one high-rise building with over 250 family units, was not designed to accommodate a large number of children playing and signs advised against "running, playing, riding bicycles, or skateboarding in the halls" (and lobby). Apart from the hallways, lobby and the relative sterile grounds, there were no interior and few exterior facilities suited to the needs and interests of children.

H. General Findings on Redesign and Redevelopment

The following outlines findings of a more general nature which apply to redesign and redevelopment:

All problems are not due to physical deterioration; similarly all solutions are not physically based.

The case studies clearly indicated that projects in need of redesign and redevelopment are experiencing a range of problems and that these problems are not solely physical in nature.

Projects were experiencing a range of physical problems linked to the aging of the stock (including failure of major systems and components beyond the useful life cycle) or other problems like poor insulation leading to high heating costs, poor original design and inadequate maintenance practices (planning and expenditures).

Clearly, much of the problem requires a physical stock-related solution. For example, decisions are required regarding systems to be repaired or replaced, energy-related additions which could benefit the project, or building design or site layout changes to increase security.

Other problems were client-based such as the lack of demand or suitability of some unit types. Social problems were considered to be a major factor influencing public housing projects and were identified in almost all of the case studies in one form or another. Social problems include drug use and trafficking, vandalism and violence, and minority group conflicts. Poor recreational and social service facilities for tenants were also identified as concerns.

The containment of social problems is critical to achieving the program objective of "adequate, decent and safe housing". To this end, project management staff need to be certain that solutions selected for their project do actually address the problem and its cause. In one case study, for example, changes in site design seemed to be an effective means of demonstrating to tenants that "management cares". In the absence of addressing more fundamental causes of social problems, the likely end result is little change in tenant views and the physical rearrangement of site design with little social consequence.

Experience gained in the case studies and past regeneration projects indicate that any major physical modifications to the project or its social or operating environment would be difficult to achieve without tenant support. Low-income households very often see themselves more as victims, than as beneficiaries of the social services they require. Both the Uniacke Square regeneration project and the case study workshop found that tenants have a strong mistrust of the sincerity of government officials. Tenants living in an environment where they are alienated will resist supporting or co-operating with a redesign or redevelopment team. A partnership with tenants and other government bodies serving the tenant population is essential to the achievement of conversion, redesign and redevelopment goals.

The resolution of complex problems requires an multi-disciplinary team of experts and sound planning.

As noted above, projects requiring major modification are usually associated with more than one problem and one of the key problems is generally some form of physical deterioration. Each of these cases is unique, and the potential solutions diverse, requiring some flexibility for resolution. The case studies provided examples of project managers proceeding with repair activities which did not solve the problem in the short term (e.g. applying new exterior finish to row housing without addressing the moisture problem in the walls) or which did not provide long term solutions for the project (e.g. the total costs of repairing a building were so great that it may have been better to start over).

Before undertaking a conversion, redesign or redevelopment project, an expert assessment of the problems within the project is necessary and should be conducted without a predisposition to recommending physical changes. Such an assessment could involve a multi-disciplinary team of experts to ensure that the range of physical, administrative, managerial, financial and social issues can be professionally addressed. The use of individuals with experience in other major modifications of projects would ensure that previous experience is transferable.

As noted above, tenants should be full participants in the planning process. In addition, the opportunity to maximize human and financial resources which can be applied to the project should be pursued by ensuring the full cooperation and involvement of all government bodies involved with the project (e.g. social services).

Included in any expert assessment or periodic in-depth review is consideration of whether the project or part of the project should be demolished. Some of the case studies indicated a need for a partial or full demolition and yet in these projects substantial dollars were being invested in "a lost cause". In one case study, the per unit cost was so great that it is clearly less expensive to start over than repair.

I. The Need for Conversion, Redesign and Redevelopment

This section examines the incidence of need for conversion, redesign and redevelopment. The findings in this section rely on data from the Survey of Public Housing Project Managers.

The report provides lower-bound and upper-bound estimates of the number of projects requiring conversion, redesign and/or redevelopment. The lower-bound estimates are for projects which were identified as needing conversion, redesign or redevelopment in the Survey of Public Housing Project Managers and which were found to fail the Minimum Property Standards in the Physical Condition Survey.

Although poor physical condition is not necessarily a pre-requisite to conversion, redesign and redevelopment, regeneration efforts to date (i.e. Uniacke Square and Regent Court) have been in projects which were in poor physical condition. At the national level of analysis, projects which fail the Minimum Property Standards are considered to be more likely candidates for conversion, redesign and redevelopment and are used to estimate the lower-bound levels of need for conversion, redesign and redevelopment. The upper-bound estimates are for projects in need of conversion, redesign and redevelopment which fail or just meet the Minimum Property Standards.

Conversion includes subdividing large units into smaller ones, combining small units into larger ones and changing unit layouts. Projects identifying a need for conversions were only considered if they also had a vacancy or turnover problem linked to unit size or type. Table 7.1 establishes an upper limit of 2.2 per cent of projects and 5.7 per cent of units as conversion candidates. Where projects also fail the condition rating, only 0.1 per cent of projects and 0.4 per cent of units qualify as conversion candidates.

The case study data indicated that conversion was costly and that several non-physical options should be considered prior to undertaking a physical conversion. Based on this information, conversion is not considered a viable physical intervention and is not included in the estimate of total modification need (total redesign and redevelopment only).

Redesign includes changing the project image or appearance, changing the layout of the site and changing circulation patterns.

Table 7.1 indicates that a maximum of 6.7 per cent of projects and 12.3 per cent of units which either fail or meet minimum property standards qualify as redesign candidates. Where projects only failed the condition rating, just 1.0 per cent of projects and 3.0 per cent of units qualify as redesign candidates.

Redevelopment includes a broad range of activities including the addition or construction of units or buildings, the demolition of some housing units or buildings, the addition of space for non-residential uses and the addition of building space for residential applications.

TABLE 7.1
NEED ("CANDIDATES") FOR CONVERSION, REDESIGN AND REDEVELOPMENT

PROJECTS

	FAILS CONDITION RATING	% (STOCK)	FAILS OR MEETS	% (STOCK)
Conversion	5	0.1	107	2.2
Redesign	46	1.0	322	6.7
Redevelopment	21	0.4	297	6.2
TOTAL REDESIGN AND REDEVELOPMENT ONLY (excludes conversion and double counting)	57	1.2	500	10.5

UNITS

	FAILS CONDITION RATING	% (STOCK)	FAILS OR MEETS	% (STOCK)
Conversion	815	0.4	11,691	5.7
Redesign	6,231	3.0	25,141	12.3
Redevelopment	3,593	1.4	21,663	10.6
TOTAL REDESIGN AND REDEVELOPMENT ONLY (excludes conversion and double counting)	6,766	3.3	35,885	17.5

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1988; Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 7.1 shows that no more than 6.2 per cent of projects and 10.6 per cent of units which either fail or meet minimum property standards are redevelopment candidates. Where projects only failed the condition rating, 0.4 per cent of projects and 1.4 per cent of units meet the criteria.

Overall, and excluding conversion need, the upper limit for combined redesign and redevelopment (i.e. projects either fail or meet minimum property standards) need is 10.5 per cent of projects and 17.5 per cent of units. Under the lower limit, where projects also failed the condition rating, only 1.2 per cent of projects and 3.3 per cent of units qualified as candidates for major modification.

J. Establishing the Potential Financial Implications of Modifying Projects in Need of Redesign and Redevelopment

The previous section has identified projects with a redesign or redevelopment need. This need is particularly acute for 57 projects (comprising 6,766 units) which fail the condition rating undertaken by the CMHC inspector during the Physical Condition Survey in 1988.

Identifying the incidence of need is relatively simple compared to estimating the magnitude of the financial implications. Each solution is project specific and can include a range of interventions. In order to dimension the potential financial implications, the best approach therefore is to use previous precedents, in this case the eight case studies on redesign/redevelopment, experience at Uniacke Square, and known information (i.e. needed repair and replacement actions) on the 57 projects identified. It should be clear at the outset that the intent of this exercise is to provide a broad overall estimate of the potential dollars involved in modifying these projects. Estimation of a precise cost is not possible.

The estimation of costs for redesign and redevelopment is based on two basic relationships. First, redesign and redevelopment estimates for both Uniacke Square and the case studies are well over double the cost for ongoing repair and replacement of deteriorating systems. Redesign and redevelopment would include significant modification to a project, while repair and replacement would maintain the status quo. The case studies estimate would be 2.3 times greater, while the Uniacke Square estimate is 1.9 times greater. A factor of two is used in subsequent calculations.

Second, redesign and redevelopment projects must also consider non-construction costs, such as relocation of tenants, community development activities, on-site staff charges, fees and permits and a reasonable contingency budget. In the case of Uniacke, non-construction costs represent an increment of about one-third of construction costs. Table 7.2 presents the information used to estimate the financial exposure for the 57 projects identified as needing redesign and redevelopment.

TABLE 7.2
ACTUAL COST PRECEDENTS FOR REDESIGN/REDEVELOPMENT

	UNIACKE SQUARE PER UNIT ($)	CASE STUDIES PER UNIT ($)
Actual repair/replace costs	16,393	10,847
REDESIGN/REDEVELOPMENT ESTIMATES		
Construction costs only	31,000	25,374
All costs, including non-construction costs	40,967	-

SOURCE: Uniacke Square Regeneration, Professional Standards, CMHC, 1989; Case Studies of the Need for Conversion, Redesign and Redevelopment, Program Evaluation Division, CMHC, 1989.

Table 7.3 provides a lower-bound estimate of redesign and redevelopment costs for the public housing portfolio. The cost estimate for maintaining the status quo would be $50.1 million. Construction costs for redesign and redevelopment are estimated at double the status quo scenario, and would result in a requirement of $100.2 million. Finally, non-construction costs, one-third greater than just construction costs would produce a final estimate of $133.3 million for the 57 projects identified as redesign and redevelopment candidates, and failing the NHA Minimum Property Standards.

TABLE 7.3
LOWER-BOUND REDESIGN/REDEVELOPMENT COST ESTIMATES FOR THE PUBLIC HOUSING PORTFOLIO PROJECTS FAILING NHA MINIMUM PROPERTY STANDARDS
(n=29, N=57)

	TOTAL ($MILLIONS)	PER UNIT ($)
Actual repair/replace costs	50.1	7,405
REDESIGN/REDEVELOPMENT ESTIMATES		
Construction costs only	100.2	14,810
All costs, including non-construction costs	133.3	19,697

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 7.4 provides an upper-bound estimate of redesign and redevelopment costs for the Public Housing Portfolio. Using the same cost estimating procedure, a final cost estimate of $289.7 million is produced for the 500 projects (or 35,885 units) identified as redesign and redevelopment candidates and failing or just meeting the NHA Minimum Property Standards.

Based on the assumptions used, the cost of redesign and redevelopment in the public housing stock is therefore estimated to be between $133.3 million and $289.7 million. The lower-bound and upper-bound estimates respectively include $50 million and $109 million in repairs and replacements already included in the estimate of repair and replacement needs for the public stock as a whole. The incremental cost of redesign and redevelopment is therefore estimated to be between $83.2 million and $180.3 million.

TABLE 7.4
UPPER-BOUND REDESIGN/REDEVELOPMENT COST ESTIMATES FOR PUBLIC HOUSING PROJECTS FAILING OR JUST MEETING NHA MINIMUM PROPERTY STANDARDS
(n=170, N=500)

	TOTAL ($MILLIONS)	PER UNIT ($)
Actual repair/replace costs	108.9	3,035
REDESIGN/REDEVELOPMENT ESTIMATES		
Construction costs only	217.8	6,070
All costs, including non-construction costs	289.7	8,072

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

K. Summary

This chapter has focussed on a sub-set of projects requiring conversion, redesign and redevelopment. Data from case studies of eight public housing projects were used to further the understanding of projects with these needs. The Survey of Project Managers provided data on the incidence of need for conversion, redesign and redevelopment in the public housing stock.

The physical conversion of units was found to be a costly solution to the problem of under-utilized stock. Conversions could result in a net decrease in the total number of units because many requested conversions are from small to larger units. Although units identified for conversion are considered to be less desirable by tenants, vacancy rates are still low and units are generally in good condition. The estimated cost of conversion from a bachelor to a one bedroom unit is estimated to be about $20,000.

Non-physical options such as a change in client (e.g. non-elderly singles in bachelor units) or a change in use (e.g. nursing facility in bachelor unit) should be considered prior to physical conversion.

There is a need for redesign and redevelopment (modification/regeneration) of a small portion of the public housing portfolio. The evaluation estimated that up to 500 projects (10.5 per cent of the portfolio) were candidates for some form of redesign and redevelopment. About 57 projects (1.2 per cent of the total portfolio) of these projects also do not meet NHA

Minimum Property Standards for Existing Residential Buildings. Although regeneration activities are not necessarily restricted to projects in poor condition, regeneration efforts to this date have been in projects which were in poor physical condition. These 57 projects are therefore the most likely candidates for redesign and redevelopment and constitute a lower-bound estimate.

Although estimating redesign and redevelopment costs is difficult, the evaluation provides a lower-bound estimate of $133 million (for 57 projects), and an upper-bound estimate of $289 million (for 500 projects). These estimates recognize that redesign and redevelopment needs are more critical in projects which fail or just meet the NHA standards. Furthermore, the lower-bound and upper-bound estimates respectively include $50 million and $109 million in repairs and replacements already included in the estimate of repair and replacement needs for the public stock as a whole. The incremental cost of redesign and redevelopment is therefore estimated to be between $83.2 million and $180.8 million.

The case studies identified redesign options including changes in site layout and major renovations leading to changes to the image and appearance of projects. They also identified redevelopement options including the addition and demolition of units as well as the addition of community facilities and non-residential uses. The addition of community facilities was an important option in large family projects, particularly large high-rise projects with few amenities suited to the needs and interests of children.

Many of the projects examined are experiencing a range of physical problems from major system failure due to poor original design. In addition, they could also be encountering social problems such as drug use and trafficking, vandalism and violence. In some instances, the social problems were the main cause of concern in the project.

The case studies have indicated that some physical solutions have not addressed and therefore have not resolved the social problem and its cause. Several case studies noted the importance of working closely with tenants and building their trust and support.

The case studies also indicated that managers have undertaken repair work without understanding the implications of their actions or in the absence of a thorough plan. Complex social and physical problems require sound planning and a multi-disciplinary team of experts to investigate all the problems within the project and all the solutions that might apply, without a predisposition to recommending physical changes. The use of individuals with experience in other projects would ensure that previous experience is transferable.

VIII PROGRAM LEVEL OF EFFORT TO MAINTAIN AN ADEQUATE PUBLIC HOUSING STOCK

Previous sections of the report have described the condition of the public housing stock according to NHA minimum property standards and to needed repair and replacement costs. This section will link the condition of the stock with past efforts in the maintenance, modernization and improvement of the stock. The main emphasis is to examine whether past efforts and levels of expenditures have been sufficient to maintain the condition of the public housing stock.

The major issue is whether maintenance, modernization and improvement efforts have been sufficient and effective in preventing the deterioration of the stock and the growth of a backlog of repairs, replacements, additions and upgrades over the years. The analysis must consider first, whether the overall pool of maintenance and M&I funding was sufficiently large to meet needs and, second, whether maintenance and M&I funds were appropriately allocated according to need. Several lines of evidence are used; levels of maintenance and M&I expenditures and their allocation are examined against the condition of public housing projects and against levels of need for repairs, replacements, additions and upgrades. Whether maintenance and M&I work has been postponed because of lack of budget is also examined. Finally, this section examines the incidence of postponed maintenance and M&I work by levels of maintenance expenditures.

A. The Backlog of Need for Repairs, Replacements, Additions and Upgrades in the Public Housing Stock

A major evaluation question is whether sufficient funding has been allocated over the years to meet the level of need for repairs, replacements, additions and upgrades in the public housing stock. This section examines whether a backlog of repairs, replacements, additions and upgrades exists in the public housing stock. A backlog is defined as the cumulative volume of needed repairs, replacements, additions and upgrades beyond the normal annual accrual in any given year. The backlog for 1988, when the inspections were conducted, is of particular interest here.

The backlog is estimated by comparing the estimate of repair, replacement, addition and upgrade actions needed at the time of the inspections with the available funding for maintenance and modernization and improvement (M&I) for 1988. This approach assumes that all funds available in that year were appropriately allocated to public housing projects according to the need for repairs, replacements, additions and upgrades.

As previously discussed, the Physical Condition Survey identified that, at one point in time (November 1987 - March 1988), $349.3 million would be needed for repairs and replacements to existing construction systems of public housing projects. Another $133.4 million was identified to undertake additions and upgrades to meet current code requirements or to realize major cost savings. Undertaking these repairs and replacements and the additions and upgrades would therefore require an estimated $482.7 million.

In comparison, $148.5 million and $125 million were budgeted for maintenance and M&I expenditures respectively, in the 1988 budget for a total of $273.5 million. As shown in Table 8.1, the gap between the level of need identified and the 1988 budget allocation is therefore in the order of $209.2 million assuming that all funds available are appropriately allocated to public housing projects according to levels of need.

TABLE 8.1
ESTIMATION OF THE BACKLOG OF REPAIRS, REPLACEMENTS ADDITIONS AND UPGRADES TO THE PUBLIC HOUSING STOCK

1988 maintenance and M&I budget	$273.5 million
Outstanding repairs and replacements	($349.3 million)
Additions and upgrades	($133.4 million)
BACKLOG	($209.2 million)

The level of estimated backlog should be interpreted with caution. At this point, no information is available on the annual accrual of additional or "new" repair and replacement needs in the public housing stock. It is therefore difficult to establish whether the backlog has increased or decreased in recent years. The Administrative Expense Data Base however indicates that the level of combined maintenance and M&I expenditures has increased during the 1980's. Given an assumption that the annual level of expenditures for maintenance and M&I in recent years has exceeded the annual accrual of "new" repairs, replacements, additions and upgrades, the backlog could be decreasing.

Under such a scenario, a continued increase in maintenance and M&I levels in future years could accommodate both the annual accrual of "new" need and the backlog identified in the Physical Condition Survey. This observation should be tempered by the fact that the level of "new" annual accrual is likely to increase with the aging of the stock.

Three major factors should be considered when interpreting the identified backlog of needs for repairs, replacements, additions and upgrades. First, given the aging of the public housing stock, the level of annual accrual needs is likely to increase. Second, some of the repairs and replacements identified in the Physical Condition Survey could be phased over five years; most actions were however required within three years. Finally, a better allocation of maintenance and M&I resources according to need could improve the effectiveness of existing maintenance and M&I funding and of any additional funding made available in the future.

The level of time and staff resources necessary in previous regeneration efforts indicate that any future national regeneration effort would have to be phased over several years. The cost estimates for redesign and redevelopment identified in Chapter VII are therefore not included in the estimate of the backlog of repairs and replacements, additions and upgrades.

B. Analysis of Past Efforts in Maintenance and M&I and the Condition of the Public Housing Stock

Other evidence of the existence of a backlog comes from the comparison of past levels of expenditures for maintenance and M&I and the present condition of the stock.[1] The deterioration of public housing projects failing or just meeting NHA minimum property standards is likely to occur over the course of several years. A closer examination of 1979-86 average level of annual expenditures by project condition ratings and by levels of need for repairs and replacements gives further indication of whether the expenditures have been sufficient and well allocated.

Table 8.2 presents the average annual level of maintenance and M&I expenditures from 1979 to 1986 by project condition ratings. Projects failing the NHA standards, which represent 6.2 per cent of all units, received just under 10 per cent of total annual expenditures of $154 million.

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[1] All maintenance and M&I expenditures data in the remainder of this chapter come from the Public Housing Administrative Expense Data Base. The analysis and estimates presented are based on the number of projects which were inspected during the Physical Condition Survey and for which data from the Administrative Expense Data Base was available. Although the observations were weighted to reflect actual population proportions, estimates of maintenance and M&I expenditures may therefore vary slightly from actual budgeted expenditures.

TABLE 8.2
ESTIMATES OF AVERAGE ANNUAL COMBINED MAINTENANCE AND M&I EXPENDITURES (1979-1986) BY PROJECT CONDITION RATINGS
(n=990, N=4787)

NHA STANDARDS	AVERAGE ANNUAL MAINT./M&I EXPENDITURES[1] (1988 $MILLIONS)	PER CENT	% OF UNITS	% OF TOTAL REPAIR AND REPLACEMENT COSTS
Fails	15.08	9.8	6.2	21.8
Meets	90.60	58.8	51.5	58.6
Exceeds	48.40	31.4	42.3	19.6
TOTAL	154.08	100.0	100.0	100.0

SOURCE: Administrative Expense Data Base (1979-86), Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

NOTE: [1] Average annual maintenance and M&I expenditures in this chapter are expressed in 1988 dollars. The Consumer Price Index for Housing for February 1988 was used in indexing the figures.

On a per unit basis, Table 8.3 indicates that public housing projects which fail the NHA standards do so despite significantly higher levels of maintenance and M&I expenditures per unit over the previous eight years than projects minimally meeting or exceeding the standards. The trend holds for both family and senior projects, although maintenance and M&I expenditures for family projects are approximately twice that for senior projects. Overall, projects failing the minimum property standards received, on a per unit basis, more than double the level of expenditures than projects exceeding the NHA standards. These levels of expenditures do not appear to have been sufficient. Failing projects, which received under 10 per cent of maintenance and M&I expenditures, today require 21.8 per cent of all repair and replacement costs, more than three times their proportion of units in the stock. (Table 8.2).

TABLE 8.3
ESTIMATES OF AVERAGE ANNUAL COMBINED MAINTENANCE AND M&I EXPENDITURES PER UNIT (1979-1986) BY CLIENT TYPE AND PROJECT CONDITION RATINGS
(n=990, N=4787)

NHA STANDARDS	FAMILY PROJECTS (1988 $)	SENIOR PROJECTS (1988 $)	ALL PROJECTS (1988 $)
Fails	1,289	631	1,173
Meets	1,036	468	846
Exceeds	1,053	414	549
ALL	1,065	437	741

SOURCE: Administrative Expense Data Base (1979-86), Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Reports by project managers of postponed maintenance or M&I work due to lack of budget is another indicator of the underfunding or perhaps misallocation of the maintenance and M&I budgets. Table 8.4 indicates that in 1987 one-fifth of projects experienced postponed maintenance and close to one-third postponed M&I work because of lack of budget. Failing projects had the highest incidence of projects with postponed maintenance followed by projects just meeting the NHA standards. At the same time, postponement of M&I because of lack of budget was a common problem for approximately one-third of projects, irrespective of condition ratings.

TABLE 8.4
INCIDENCE OF POSTPONED MAINTENANCE AND M&I IN 1987 DUE TO LACK OF BUDGET BY PROJECT CONDITION RATINGS
(n=889, N=4780)

NHA STANDARDS	% OF PROJECTS WITH POSTPONED MAINTENANCE	% OF PROJECTS WITH POSTPONED M&I
Fails	26.7	30.3
Meets	24.6	33.8
Exceeds	18.3	28.6
ALL	21.8	31.3

SOURCE: Survey of Public Housing Project Managers and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

A closer examination of the public housing projects which require the highest level of repair and replacement expenditures per unit reveals further indications of underfunding and perhaps misallocation of maintenance and M&I expenditures. Underfunding has been particularly severe for public housing projects requiring $5,000 or more per unit for repairs and replacement. Table 8.5 indicates that these projects, which represent 7.5 per cent of the units in the stock, require close to 45 per cent of all repairs and replacement expenditures despite receiving, at $1,281 per unit annually, the highest level of maintenance and M&I per unit over the previous eight years.

TABLE 8.5
ESTIMATES OF AVERAGE ANNUAL COMBINED MAINTENANCE AND M&I EXPENDITURES (1979-1986) BY REPAIR AND REPLACEMENT COSTS PER UNIT
(n=990, N=4787)

R&R COST PER UNIT (1988 $)	AVERAGE ANNUAL MAINT./M&I EXPENDITURES (1988 $MILL.)	%	AVERAGE ANNUAL MAINT./M&I EXP.PER UNIT (1988 $)	% OF UNITS	% OF TOTAL REPAIR AND REPLACEMENT COSTS
0-499	58.26	37.9	620	45.2	3.7
500-999	17.51	11.3	689	12.2	5.3
1,000-2,499	38.33	24.8	749	24.6	24.4
2,500-4,999	20.06	13.0	913	10.5	22.4
Over 5,000	20.06	13.0	1,281	7.5	44.2
ALL	154.26	100.0	740	100.0	100.0

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

A high incidence of postponed maintenance and M&I work because of lack of budget for these projects reinforces the findings above. Table 8.6 shows that 47.7 per cent of projects requiring $5,000 or more in repairs and replacements suffered from postponed modernization or improvement actions because of lack of budgets in 1987, the highest level of any project category. These projects also had the highest incidence, close to 30 per cent, of projects with postponed maintenance because of lack of budget in 1987.

TABLE 8.6
INCIDENCE OF POSTPONED MAINTENANCE AND M&I IN 1987 DUE TO LACK OF BUDGET BY REPAIR AND REPLACEMENT COSTS PER UNIT
(n=892, N=4880)

R&R COST PER UNIT (1988 $)	% OF PROJECTS WITH POSTPONED MAINTENANCE	% OF PROJECTS WITH POSTPONED M&I
0-499	21.5	28.5
500-999	21.0	36.0
1,000-2,499	20.1	30.5
2,500-4,999	22.9	28.9
Over 5,000	29.4	47.7
ALL	21.9	31.3

SOURCE: Survey of Public Housing Project Managers and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

C. Levels of Maintenance Expenditures by Project Condition

Maintenance expenditures cover regular maintenance and repairs to public housing projects. Because these actions do not involve the replacement, addition or upgrade of the various construction systems in a project, maintenance costs should increase as project condition deteriorates. Tables 8.7 and 8.8 present the average annual level of maintenance expenditures between 1979 and 1986 by project condition. As could be expected, public housing projects which fail the NHA standards have the highest maintenance costs per unit, followed by projects which minimally meet the standards. This trend holds for both family and senior projects, although maintenance costs for family projects are approximately twice that for senior projects.

TABLE 8.7
ESTIMATES OF AVERAGE ANNUAL MAINTENANCE EXPENDITURES (1979-1986) BY PROJECT CONDITION RATINGS (n=990, N=4787)

NHA STANDARDS	AVERAGE ANNUAL MAINTENANCE EXPENDITURES (1988 $MILLIONS)	PER CENT	% OF UNITS	% OF TOTAL REPAIR AND REPLACEMENT COSTS
Fails	9.52	10.4	6.2	21.8
Meets	55.02	60.4	51.5	58.6
Exceeds	26.64	29.2	42.3	19.6
TOTAL	91.18	100.0	100.0	100.0

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

TABLE 8.8
ESTIMATES OF AVERAGE ANNUAL MAINTENANCE EXPENDITURES PER UNIT (1979-1986) BY CLIENT TYPE AND PROJECT CONDITION RATINGS (n=990, N=4787)

NHA STANDARDS	FAMILY PROJECTS (1988 $)	SENIOR PROJECTS (1988 $)	ALL PROJECTS (1988 $)
Fails	798	472	740
Meets	623	295	513
Exceeds	591	225	302
ALL	636	253	438

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

While higher maintenance costs are associated with worsening project condition, insufficient levels of funding and postponed maintenance can contribute to further deterioration of projects. There is evidence that projects which in 1988 failed the NHA standards received less than necessary levels of funding for maintenance in previous years. Failing projects, which account for 6.2 per cent of all units and require 21.8 per cent of all repair and replacement needs, received just over 10 per cent of maintenance expenditures between 1979 and

1986. Moreover, Table 8.4 indicated that projects failing or minimally meeting NHA standards had the highest incidence, approximately 27 per cent, of projects with postponed maintenance because of lack of budget in 1987. Postponed maintenance because of lack of budget in 1987 was, however, a problem across all projects. Just under 20 per cent of projects exceeding NHA standards also had maintenance delayed because of lack of budget in 1987.

Examination of maintenance expenditure levels against levels of repair and replacement needs further supports the findings above. Table 8.9 indicates that maintenance expenditures per unit remain similar for projects which require less than $2,500 in repairs and replacements. This is understandable as a minimum level of maintenance is required for all projects irrespective of project condition. As condition worsens and repair and replacement costs reach $2,500 and above, maintenance costs per unit increase as well. This increase is not likely to be sufficient to keep pace with the increasing need for repairs (note that replacements would be addressed under the M&I budget). Public housing projects with repair and replacement costs of $2,500 or above account for two-thirds of all repair and replacement needs, but were allocated just over one-quarter of the maintenance budget.

TABLE 8.9
ESTIMATES OF AVERAGE ANNUAL MAINTENANCE EXPENDITURES (1979-1986) BY REPAIR AND REPLACEMENT COSTS PER UNIT (n=990, N=4787)

R&R COST PER UNIT (1988 $)	AVERAGE ANNUAL MAINTENANCE EXPENDITURES (1988 $MILL.)	%	AVERAGE ANNUAL MAINTENANCE EXP.PER UNIT (1988 $)	% OF UNITS	% OF TOTAL REPAIR AND REPLACEMENT COSTS
0-499	32.78	38.4	349	45.2	3.7
500-999	10.65	12.4	419	12.2	5.3
1,000-2,499	20.05	23.4	392	24.6	24.4
2,500-4,999	11.27	13.2	513	10.5	22.4
Over 5,000	10.82	12.6	689	7.5	44.2
ALL	85.57	100.0	411	100.0	100.0

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

D. Levels of Modernization and Improvement Expenditures by Project Condition

While the maintenance budget addresses maintenance and repair needs, the M&I budget addresses the needs for replacement, modernization and improvements. Although M&I expenditures prior to the Physical Condition Survey should have been targeted to deteriorating projects, there is evidence that projects which today fail the NHA standards received less than the necessary level of M&I expenditures.

Table 8.10 indicates that projects which failed the NHA standards in 1988 and account for over 20 per cent of all repair and replacement needs received less than 10 per cent of average annual M&I expenditures between 1979 and 1986. As shown in Table 8.11, M&I expenditures per unit have not been much different, controlling for family and senior projects, for projects which in 1988 failed the NHA standards than for projects which then exceeded the standards.

TABLE 8.10
ESTIMATES OF AVERAGE ANNUAL MODERNIZATION AND IMPROVEMENTS EXPENDITURES (M&I) (1979-1986)
BY PROJECT CONDITION RATINGS
(n=990, N=4787)

NHA STANDARDS	AVERAGE ANNUAL M&I EXPENDITURES (1988 $MILLIONS)	PER CENT	% OF UNITS	% OF TOTAL REPAIR AND REPLACEMENT COSTS
Fails	5.56	8.8	6.2	21.8
Meets	35.57	56.6	51.5	58.6
Exceeds	21.77	34.6	42.3	19.6
TOTAL	62.89	100.0	100.0	100.0

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

TABLE 8.11
ESTIMATES OF AVERAGE ANNUAL MODERNIZATION AND IMPROVEMENTS EXPENDITURES PER UNIT (1979-1986) BY CLIENT TYPE AND PROJECT CONDITION RATINGS
(n=990, N=4787)

NHA STANDARDS	FAMILY PROJECTS (1988 $)	SENIOR PROJECTS (1988 $)	ALL PROJECTS (1988 $)
Fails	491	160	432
Meets	412	173	332
Exceeds	461	190	246
ALL	429	184	302

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

Table 8.12 shows that only projects which have repair and replacement needs of $5,000 or above received M&I expenditures per unit well above the national average during the 1979-86 period. M&I expenditures per unit for these projects were just over double that of projects which require less than one-tenth their level of repair and replacement expenditures per unit. At the same time, these projects with the highest level of repair and replacement needs experienced, with 47.7 per cent of projects, the highest incidence of M&I activities being postponed because of a lack of budget in 1987 (Table 8.6).

Levels of M&I expenditures do not vary as much as do maintenance expenditures by condition ratings or for projects which require less than $5,000 in repairs and replacements. M&I expenditures per unit for projects failing the NHA standards were less than double than for those exceeding the standards. Similarly, projects which today require between $2,500 and $4,999 per unit in repairs or replacements, received only marginally more M&I funds, at $366 per unit annually, than projects which today require less than $500 per unit in repairs and replacements, at $247 per unit in annual M&I funding. Furthermore, Tables 8.4 and 8.6 indicated that the incidence of projects with postponed M&I is not significantly different by condition ratings or by repair and replacement cost categories under $5,000. This may indicate some misallocation of M&I expenditures according to levels of need.

TABLE 8.12
ESTIMATES OF AVERAGE ANNUAL MODERNIZATION AND IMPROVEMENTS EXPENDITURES (M&I) (1979-1986) BY REPAIR AND REPLACEMENT COSTS PER UNIT
(n=990, N=4787)

R&R COSTS PER UNIT (1988 $)	AVERAGE ANNUAL M&I EXPENDITURES (1988 $MILLIONS)	%	AVERAGE ANNUAL M&I EXP. PER UNIT (1988 $)	% OF UNITS	% OF TOTAL REPAIR AND REPLACEMENT COSTS
0-499	23.28	37.0	247	45.2	3.7
500-999	6.15	9.8	242	12.2	5.3
1,000-2,499	16.93	26.9	331	24.6	24.4
2,500-4,999	8.04	12.8	366	10.5	22.4
Over 5,000	8.55	13.6	545	7.5	44.2
TOTAL	62.96	100.0	302	100.0	100.0

SOURCE: Administrative Expense Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC 1988.

E. Incidence of Postponed Maintenance or M&I by levels of Maintenance Expenditures Per Unit

This section examines the incidence of postponed maintenance or M&I by levels of maintenance expenditures per unit. This analysis was undertaken under two main premises. First, the incidence of postponed maintenance should decrease as the maintenance expenditures for any given project increase beyond a certain level. In other words, increases in maintenance spending beyond a certain level could lessen the need to postpone maintenance work because of lack of budget. Second, increases in maintenance spending beyond a certain level could be an indicator of need for modernization and improvements.

Table 8.13 indicates that the incidence of postponed maintenance increases with the level of maintenance expenditures for projects where annual maintenance expenditures averaged less than $650 per unit. Projects with annual maintenance expenditures between $400 and $649 per unit have the highest incidence of postponed maintenance (41.9 per cent of projects). The incidence of postponed maintenance declines to under 20 per cent for projects with annual maintenance expenditures of $650 per unit or more.

This appears to indicate that while maintenance budgets lag behind the need for increased maintenance, the level of postponed maintenance decreases as more funds are made available for maintenance.

Table 8.13 also indicates that the incidence of postponed M&I because of lack of budget increases steadily as maintenance expenditures per unit increase. Projects with annual maintenance expenditures per unit of $650 or more have the highest incidence of postponed M&I because of lack of budget with 48.1 per cent of projects. This could indicate that maintenance activities are increased to make up for a shortage of funds available for M&I expenditures.

TABLE 8.13
INCIDENCE OF POSTPONED MAINTENANCE OR M&I (1987)
BY LEVEL OF ANNUAL MAINTENANCE EXPENDITURES PER UNIT (1979-86)
(n=882, N=4757)

MAINTENANCE EXPENDITURES PER UNIT (1986 $)	% OF PROJECTS WITH POSTPONED MAINTENANCE	% OF PROJECTS WITH POSTPONED M&I
0 - 240	9.8	23.5
250 - 399	21.2	24.4
400 - 649	41.9	34.7
650 or more	19.5	48.1
TOTAL	22.0	31.6

SOURCE: Administrative Expense Data Base and the Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1988.

F. Summary

This chapter examined whether past efforts and levels of expenditure have been sufficient to maintain the condition of the public housing stock at minimum property standards. The major issue was whether maintenance, modernization and improvement efforts have been sufficient and effective in preventing the deterioration of the stock and the growth of a backlog of repair, replacement, addition and upgrade needs over the years. The analysis considered first, whether the overall pool of maintenance and M&I funding was sufficiently large to meet needs, and second, whether maintenance and M&I funding were appropriately allocated according to need.

The backlog was defined as the volume of needed repairs, replacements, additions and upgrades beyond the normal accrual in any given year. Because this annual accrual of need was unknown and estimates of the condition of the stock were taken at one point in time, the only way to estimate the volume of the backlog was to compare the estimated level of actions needed at the time of the inspections with the available funding for maintenance and M&I for 1988. This analysis did not permit the determination of how many years the backlog has taken to develop or whether the stock was in better or worse condition at the time of the inspection than in previous years.

A gap or backlog of $209.2 million was identified between the level of need identified for repairs, replacements, additions and upgrades, and the 1988 budget allocation for maintenance and M&I. Underlying this estimate is the assumption that all funds available are appropriately allocated to public housing projects according to the levels of need. Funding required for unit conversions, redesign and redevelopment of public housing projects would add to the backlog identified.

The level of the estimated backlog should be treated with caution. It is difficult with the data available to establish whether the backlog has increased or decreased in recent years. The increase in maintenance and modernization and improvement budgets through the 1980's indicate that the level of the backlog could be decreasing.

A continued increase in maintenance and M&I levels in future years could accommodate the annual accrual of "new" repairs, replacements, additions and upgrades as well as the backlog identified. Such optimism should be moderated to take into account that the level of "new" annual accrual need is likely to increase with the aging of the stock.

Levels of maintenance and M&I expenditures from 1979 to 1986 have not been sufficient for projects which in 1988 failed the NHA minimum property standards or which required more than $5,000 per unit in repairs and replacements. Projects failing the NHA standards had the highest maintenance costs per unit, followed by projects which minimally meet the standards. This trend held for both family and senior projects although maintenance costs for family projects are approximately twice those for senior projects.

M&I expenditures per unit have not been much higher for failing projects than for projects meeting the standards when controlling for client type. Only projects requiring $5,000 or more per unit for repairs and replacements received M&I funding per unit well above the national average.

Failing projects had the highest incidence of project managers reporting postponed maintenance because of lack of budget, followed by projects just meeting the NHA standards.

Postponement of M&I because of lack of budget was a common problem for approximately one-third of projects, irrespective of project condition ratings. Projects requiring $5,000 or more for repairs and replacements had the highest incidence of both postponed maintenance (29.4 per cent) and postponed M&I (47.7 per cent) because of lack of budget.

Maintenance budgets appear to lag behind the need for increased maintenance. However, the level of postponed maintenance does decrease as more funds are made available for maintenance. The incidence of postponed M&I increases steadily as maintenance expenditures per unit increase. This relationship could indicate that maintenance activities are increased to make up for a shortage of funds available for M&I expenditures.

IX POTENTIAL IMPACTS OF THE AGING OF THE STOCK ON PHYSICAL CONDITION

As discussed previously, the aging of the public housing stock has raised much concern. This section examines the aging of the stock over the next 15 years and the implications in terms of the condition of the stock.

A. Aging of the Public Housing Stock

In 1988, when the Physical Condition Survey was conducted, the public housing stock had an average age of 14 years and was still relatively young. The age profile will change rapidly over the next 15 years. Tables 9.1 and 9.2 present the distribution of the public housing stock by age group up to 2003. As soon as 1993, close to 3,000 public housing projects or more than 60 per cent of all projects will be more than 15 years old. By 1998, no public housing projects will be less than 11 years old. More than 4,300 or close to 90 per cent of all projects will be more than 15 years old and one-quarter of projects will be over 25 years old. Finally, in 2003 all 4,801 projects will be older than 15 years and over 2,900 or 61 per cent of them will be over 25 years old.

TABLE 9.1
AGING OF THE PUBLIC HOUSING STOCK
NUMBER OF PROJECTS

PROJECT	YEAR			
AGE	1988	1993	1998	2003
1 to 10 years	1,866	490	-	-
11 to 15 years	1,750	1,376	490	-
16 to 25 years	1,106	2,701	3,126	1,866
Over 25 years	79	234	1,185	2,935
TOTAL	4,801	4,801	4,801	4,801

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

TABLE 9.2
AGING OF THE PUBLIC HOUSING STOCK
PERCENTAGE OF PROJECTS

PROJECT AGE	**YEAR**			
	1988 (%)	**1993 (%)**	**1998 (%)**	**2003 (%)**
1 to 10 years	38.9	10.2	-	-
11 to 15 years	36.4	28.7	10.2	-
16 to 25 years	23.0	56.3	65.1	38.9
Over 25 years	1.6	4.9	24.7	61.1
TOTAL	100.0	100.0	100.0	100.0

SOURCE: Project Characteristics Data Base, Program Evaluation Division, CMHC, 1988.

B. Potential Impact of the Aging of the Stock on Physical Condition

The Physical Condition Survey found that the age of public housing projects was associated with deteriorated physical condition and higher incidence of failure to meet NHA Minimum Property Standards. The aging of the stock will therefore have an impact on the condition of the public housing stock and demands for increased levels of maintenance, modernization and improvement expenditures. How fast and by how much this increase will be is difficult to predict. As previously discussed, the Physical Condition Survey provides a snapshot of the condition of the stock at one point in time. There are no indicators of changes in the condition of the stock over time and of whether increased levels of maintenance and M&I expenditures in recent years have led to improvements in the overall condition of the stock.

With these limitations in mind, projections of the 1988 physical condition of the stock were made for 1993, 1998 and 2003. These projections, presented in Tables 9.3 and 9.4, are based on the project condition ratings by the CMHC inspectors by project age group and client type. These projections reflect how project condition could evolve with the aging of the stock if the present condition profile of the stock and backlog of repairs and replacements relative to age and client type remain constant.

This simple model shows that the number and percentage of projects exceeding the NHA standards remain fairly stable over time. On the other hand, the number and percentage of projects just meeting the NHA standards decrease as the number and percentage of projects failing the standards increase steadily. Based on the assumptions stated above, approximately 55 additional projects will fall below the NHA standards every five years. By 2003, over 330 projects or 7 per cent of all public housing projects will fail the NHA standards.

TABLE 9.3
PROJECTION OF THE 1988 CONDITION OF
PUBLIC HOUSING PROJECTS FOR 1993, 1998 AND 2003
NUMBER OF PROJECTS

NHA STANDARDS	**YEAR**			
	1988[1]	**1993**	**1998**	**2003**
Fails	172	229	282	331
Meets	2,520	2,480	2,286	2,159
Exceeds	2,109	2,093	2,233	2,310
TOTAL	4,801	4,801	4,801	4,801

SOURCE: Project Characteristics Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

NOTE: [1] In order to ensure consistency and enable comparison with projections for 1993, 1998 and 2003, the number and percentage of projects and units by condition ratings and the repair and replacement costs for 1988 were calculated according to the same methodology used in the projections. Figures presented in this chapter for 1988 may therefore vary slightly from figures presented in previous chapters of the report where a more refined weighting scheme was in effect.

TABLE 9.4
PROJECTION OF THE 1988 CONDITION OF PUBLIC HOUSING PROJECTS FOR 1993, 1998 AND 2003
PERCENTAGE OF PROJECTS

NHA STANDARDS	YEAR 1988 (%)	1993 (%)	1998 (%)	2003 (%)
Fails	3.6	4.8	5.9	6.9
Meets	52.5	51.6	47.6	45.0
Exceeds	43.9	43.6	46.5	48.1
TOTAL	100.0	100.0	100.0	100.0

SOURCE: Project Characteristics Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Tables 9.5 and 9.6 present the projection in terms of number and percentage of public housing units failing, meeting and exceeding the NHA standards. Because the size of projects varies across the age profile of the stock, results vary from the projections of the number and percentage of projects. The number of units located in projects failing the NHA standards will more than double by the year 2003, reaching close to 29,000 units, while the percentage of units in failing projects will increase from 6.5 per cent to 14.0 per cent. The largest increase will take place between 1993 and 1998 when close to 7,000 additional units will be located in failing projects.

The number and percentage of units in projects just meeting the NHA standards will remain relatively stable showing just a slight decline. Unlike project level information, the percentage of units located in projects exceeding the NHA standards will decrease slightly from 41 per cent in 1988 to 39 per cent by 1993, and to 37 per cent by 2003.

TABLE 9.5
PROJECTION OF THE 1988 CONDITION OF PUBLIC HOUSING PROJECTS FOR 1993, 1998 AND 2003
NUMBER OF UNITS

NHA STANDARDS	YEAR 1988	1993	1998	2003
Fails	13,239	17,176	24,089	28,767
Meets	106,961	107,384	103,024	100,755
Exceeds	84,718	80,358	77,085	75,395
TOTAL	204,918	204,918	204,918	204,918

SOURCE: Project Characteristics Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 9.6
PROJECTION OF THE 1988 CONDITION OF PUBLIC HOUSING PROJECTS FOR 1993, 1998 AND 2003
PERCENTAGE OF UNITS

NHA STANDARDS	YEAR 1988 (%)	1993 (%)	1998 (%)	2003 (%)
Fails	6.5	8.4	11.7	14.0
Meets	52.2	52.4	50.3	49.2
Exceeds	41.3	39.2	38.0	36.8
TOTAL	100.0	100.0	100.0	100.0

SOURCE: Project Characteristics Data Base and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

C. Summary

This chapter examined the aging of the public housing stock over the next 15 years and the implications in terms of the condition of the stock. Projections of the 1988 physical condition of the stock were made for 1993, 1998 and 2003. These projections indicate how project condition could evolve with the aging of the stock if the present condition profile of the stock and backlog of repairs and replacements relative to project age and client type remain constant.

In 1988, when the Physical Condition Survey was conducted, the public housing stock had an average age of 14 years and was still relatively young. The age profile of the stock will change rapidly over the next 15 years.

As soon as 1993, close to 3,000 public housing projects or more than 60 per cent of projects will be more than 15 years old. By the year 2003, all 4,801 projects will be older than 15 years and over 2,900 or 61 per cent of them will be over 25 years old.

The projection of 1988 project condition indicates that approximately 55 additional projects will fall below the NHA standards every five years. By the year 2003, over 330 or 6.9 per cent of all public housing projects will fail the NHA standards.

In terms of units, the number of units in projects failing the NHA standards will be more than double by the year 2003, reaching close to 29,000 units or 14.0 per cent of all units in the stock.

The percentage of units in projects exceeding the NHA standards will decrease slightly from 41 per cent in 1988 to 39 per cent by 1993, and to 37 per cent by 2003.

X PROGRAM TARGETING, HOUSING AFFORDABILITY AND CORE NEED

A. Introduction

Previous chapters have examined the characteristics of the public housing stock, the population residing in public housing and the physical condition of the stock. This chapter assesses the degree to which the public housing program has provided affordable, adequate and suitable housing to low-income households.

As formally stated in CMHC's program delivery guidelines and procedures manuals, the objectives of the Section 79 Federal/Provincial Program are to "provide adequate housing accommodation for individuals and families of low income within their financial capabilities". The objectives of the Section 81/82 Program are similar: "to provide decent, safe and sanitary housing for individuals and families of low income suitable to their identified needs and at rents they can afford".

The first section assesses the degree to which the public housing program is targeted to households in need. The second section assesses the degree to which the public housing programs have achieved their objectives in terms of providing affordable, adequate and suitable housing to their clients. In providing answers to these questions, this chapter draws extensively on the survey of public housing residents which was undertaken as part of the evaluation.

B. Targeting of Assistance

As was stated in the introduction, the public housing program is to provide assistance to individuals and families of low income. This section assesses the extent to which this objective has been achieved. One indicator of low income currently used by CMHC to establish the eligibility of prospective social housing clients and ensure that public assistance is targeted to households in need is the "core need income threshold". Core need income thresholds are developed for local market and non-market areas across the country and represent an estimate of the income that would be required to secure adequate and suitable accommodation in the local area without having to spend 30 per cent or more of household income on basic shelter costs. Suitable housing is defined by reference to the number, age and sex of household members (as stipulated within the National Occupancy Standard). Adherence to the National Occupancy Standard ensures that crowding problems do not exist and that an adequate number of bedrooms is available for the household.

Using the core need income threshold as an indicator of low-income status, the survey data indicate that the assistance provided under the public housing program is well targeted to low-income households (Table 10.1). Nationally, 96.1 per cent of all client households have incomes at or below the core need income threshold established for their area of residence. The degree of targeting achieved ranges from 91.6 per cent in Saskatchewan to 99.6 per cent in Manitoba. No pronounced differences in the level of targeting by client type are detected and only marginal differences are observed among household types and sizes. The proportion of households with incomes at or below the core need income threshold is highest among single person households (99.3 per cent) and is lowest among couples without children (80.7 per cent). Somewhat less variation in targeting is evident among household size groups, ranging from a low of 90.1 per cent among two person households to a high of 99.3 per cent among single person households.

C. Rent Determination Schemes

A central objective of the public housing program is that the housing provided be affordable to low-income households. As stated within the program objectives, the housing provided under the public housing program is to be "within the financial capabilities" of low-income residents (Section 79) and is to be provided "at rents they can afford" (Section 81/82). Given the low incomes of the target client group, the achievement of this objective requires that rents be subsidized. The amount of subsidy required is defined through reference to the Federal Graduated Rent Scale, which sets rents according to adjusted household incomes. Provinces and territories are permitted to use their own rental scales. The only requirement established by CMHC is that the federal share of the subsidy be based on whichever scale produces the lowest subsidy. Both the Federal Graduated Rent Scale and provincial and territorial variations are described below.

The Federal Graduated Rent Scale establishes rental charges for fully serviced accommodation. Fully serviced accommodation refers to rental units which are supplied with heat, water, hot water, a stove and a refrigerator. If heat, water or hot water are not provided, deductions from monthly rents are made based on estimates of the cost of these utilities. If a stove or refrigerator are not provided with the unit, a further rent deduction of $1 each per month is provided for.

TABLE 10.1
PER CENT OF PUBLIC HOUSING CLIENTS WITH INCOMES AT OR BELOW THE CORE NEED INCOME THRESHOLD BY SELECTED CHARACTERISTICS

CHARACTERISTICS	INCIDENCE (PER CENT)	SAMPLE SIZE (n)
PROVINCE/TERRITORY		
Newfoundland	96.8	(145)
Prince Edward Island	97.1	(190)
Nova Scotia	93.6	(193)
New Brunswick	97.0	(166)
Quebec	94.7	(414)
Ontario	97.3	(579)
Manitoba	99.6	(125)
Saskatchewan	91.6	(187)
Alberta	94.5	(162)
British Columbia	95.1	(199)
Yukon	-	(21)
Northwest Territories	-	(22)
CLIENT TYPE		
Family	94.9	(956)
Senior	96.7	(1,229)
Family & Senior	98.5	(214)
HOUSEHOLD TYPE		
One person living alone	99.3	(1,187)
One adult with children	97.5	(536)
Couple with children	89.9	(298)
Couple without children	80.7	(218)
Other	97.7	(51)
HOUSEHOLD SIZE		
One person	99.3	(1,239)
Two persons	90.1	(453)
Three persons	94.3	(291)
Four persons	90.9	(242)
Five or more persons	97.3	(170)
ALL	96.1	(2,403)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and Northwest Territories.

Under the Graduated Rent Scale, rents are calculated on a sliding scale which ranges from 16.7 to 25 per cent of adjusted household income, subject to a minimum monthly charge of $28 per month. For families with children, rental charges are reduced by $2 per child per month. Tenants receiving social assistance are required to pay the greater of the shelter component of welfare or the rent required under the Graduated Rent Scale.

While rents are set according to adjusted household incomes under the Graduated Rent Scale, clients are protected against frequent changes in rental charges due to short term fluctuations in income. To provide client households with the security of a fixed rent for a reasonable period of time, the program guidelines stipulate that a maximum rent is to be established for the period of the lease. Upward adjustments of rent due to increased income or a reduction in family size are not to occur until the end of the lease period. However, should a tenant's income be reduced or the household have an additional child, an immediate rent reduction may take place. Where the income reduction is temporary in duration, so is the period of rent abatement. Verification of tenant incomes is the responsibility of the provinces and territories.

As was mentioned earlier, several provinces and territories have established their own procedures for calculating rent charges. As a result, significant variations exist among provinces and territories in terms of: the rent-to-income ratio used to set rents, provisions for minimum and maximum rents, the use of special scales or flat payments for particular client groups (i.e. social assistance recipients), the definition of household income used in the calculation of rental charges, the size of rent deductions assessed where clients pay for their own heat, water or hot water and the magnitude of surcharges applied where additional amenities are provided (e.g. parking, cable T.V., etc.). Provincial and territorial variations in rent determination criteria are reviewed below.

1. Rent-to-Income Ratios

Under the Federal Graduated Rent Scale, rental charges for fully serviced accommodation are calculated on a sliding scale which ranges from 16.7 to 25 per cent of adjusted household income. As is indicated in Table 10.2, the Federal Graduated Rent Scale is currently used in Newfoundland, Nova Scotia, Manitoba, Yukon (Whitehorse only), Ontario (family clients only) and Prince Edward Island (family clients only). These components of the portfolio account for just over one-third (36 per cent) of all client households served by the public housing program. In practice, however, the proportion of clients assessed rents according to the GRS is considerably smaller. This is due to the fact that clients receiving social assistance generally have their rents set by reference to a separate scale.

TABLE 10.2
RENT-TO-INCOME RATIOS USED TO ASSESS RENTS

PROVINCE/ TERRITORY	RENT-TO-INCOME RATIO USED TO ASSESS RENTS
Newfoundland	Federal GRS used where household not receiving social assistance (16.7 to 25 per cent of income).
P.E.I.	Federal GRS used for families (16.7 to 25 per cent of income). Provincial rent scale for seniors (20.0 to 25 per cent of income).
Nova Scotia	Federal GRS used where social assistance constitutes 50 per cent or less of household income (charged 16.7 to 25 per cent of income).
New Brunswick	Charged rents equal to 30 per cent of income.
Quebec	Charged rents equal to 25 per cent of 90 per cent of gross income; persons independent of household contribute an additional $53.75 per month.
Ontario	Federal GRS used for families (16.7 to 25 per cent of income). Provincial rent scale for seniors (20.0 to 25 per cent of income).
Manitoba	Federal GRS used where social assistance payments are less than 25 per cent of total income (16.7 to 25 per cent of income).
Saskatchewan	Charged rents equal to 25 per cent of income.
Alberta	Charged rents equal to 25 per cent of income.
B.C.	Charged rents equal to 30 per cent of income.
Yukon	Federal GRS used in Whitehorse (16.7 to 25 per cent of income). Elsewhere, clients are charged 25 per cent of income.
Northwest Territories	Charged rents ranging from 16.7 to 25 per cent of income (depending on family size and the "cost of living" zone in which the project is located).

SOURCE: Provincial and Territorial Manuals and 1985 Compendium of Rent-to-Income Scales (CMHC).

In the Northwest Territories rent charges range from 16.7 to 25 per cent of adjusted income with a further adjustment being made to reflect regional differences in cost of living. In Prince Edward Island and Ontario, seniors clients are charged rents ranging between 20 and 25 per cent of adjusted income. The remaining provinces utilize a single payment-to-income ratio in setting rents. Rents are charged at a flat rate of 25 per cent of adjusted income in Quebec, Saskatchewan, Alberta and the Yukon (outside of Whitehorse). Public housing clients in British Columbia and New Brunswick are charged rents at a flat rate of 30 per cent of adjusted income.

2. Rent Minima and Maxima

The Federal Graduated Rent Scale establishes a minimum monthly rental charge of $28 but does not stipulate a maximum charge. Several provinces and territories have established minimum charges which exceed $28 (Table 10.3). In four provinces, the minimum charges established exceed that prescribed by the GRS by a considerable margin: Saskatchewan ($110-$135), Quebec ($112), Alberta ($92) and Prince Edward Island ($90). These minimum charges may contribute to affordability problems among client households with very low incomes.

Two provinces and one territory have established a maximum charge for public housing units (Ontario, British Columbia and the Northwest Territories). Saskatchewan also allows for a maximum charge in cases where vacancy problems exist. These maximum charges are applied where rents based on the rent-to-income scale would exceed market rents. In such cases, the market rent is charged.

3. Rental Charges for Social Assistance Recipients

In most provinces and territories, a component of the benefits received by social assistance recipients is provided for shelter expenditures. Because their income is determined in part on the amount of their shelter costs, a normal rent scale which fixes rents as a proportion of household income cannot be used for social assistance recipients. For this reason, most provinces have established special rental charges or scales for social assistance recipients. Data from the survey of public housing tenants suggests that approximately one-third (32.7 per cent) of clients are recipients of social assistance (either provincial or municipal). Typically, social assistance recipients are charged a fixed rent (which may vary depending on whether the units are fully serviced or not) (Table 10.4). Fixed rents range from a low of $32 in the Northwest Territories to a high of $350 in Charlottetown, Prince Edward Island.

No special rent scale is used for social assistance recipients in New Brunswick. Alberta and Quebec charge social assistance recipients the same RGI ratio as regular clients (25 per cent). British Columbia sets rents at 43 per cent of social supplement allowances (equivalent to 30 per cent of total GAIN) excluding utilities and special allowances.

TABLE 10.3
RENT MINIMA AND MAXIMA

PROVINCE/TERRITORY	MINIMUM MONTHLY RENT	MAXIMUM MONTHLY RENT
Newfoundland	$28	N/A
Prince Edward Island	$90 ($50)*	N/A
Nova Scotia	$28	N/A
New Brunswick	$28	N/A
Quebec	$112	N/A
Ontario	$28	25 per cent of income or market rent (whichever is lower).
Manitoba	$28	N/A
Saskatchewan	$110-$135 ($60-$85)*	25 per cent of income or market rent (whichever is is lower).**
Alberta	$92	N/A
British Columbia	N/A	30 per cent of income or market rent (whichever is lower).
Yukon	$150***	25 per cent of income or market rent (whichever is lower.
Northwest Territories	$32	Economic rent or market rent (whichever is higher) or appraised value where homeownership is not an option.

SOURCE: Provincial and Territorial Manuals and 1985 Compendium of Rent-to-Income Scales (CMHC).

NOTE: * Figures in parentheses indicate the rent for unserviced units.

** Where vacancy problems exist.

*** Minimum rent is $32 for public housing units in Whitehorse. Elsewhere in the Yukon, the minimum rent is $150.

TABLE 10.4
RENT DETERMINATION CRITERIA FOR SOCIAL ASSISTANCE RECIPIENTS

PROVINCE/ TERRITORY	CALCULATION OF RENTS FOR SOCIAL ASSISTANCE RECIPIENTS	CLIENTS RECEIVING SOCIAL ASSISTANCE (PER CENT)	SOCIAL ASSISTANCE IS MAJOR SOURCE OF INCOME (PER CENT)
Newfoundland	Charged rents of $82 (fully serviced) or $62 (excluding heat and hot water).	45.5	33.3
Prince Edward Island	Flat monthly rent charged for unheated units. Families pay $350 in Charlottetown, $290 in Summerside and $240 elsewhere. Where other income present, S.A. clients pay greater of flat rate or GRS. Seniors charged $220 in all locations.	17.2	10.0
Nova Scotia	Rents charged range from $103-$119.	20.3	20.3
New Brunswick	No special scale used for social assistance recipients.	50.7	50.5
Quebec	Charged rents equal to 25 per cent of base income.	39.6	38.9
Ontario	Rent payments determined by family size and source of social assistance: General Welfare Assistance recipients pay between $52-$275, Family Benefits Act recipients pay between $75-$323, GAINS-D recipients pay between $75-$305.	32.9	32.2
Manitoba	Separate scale used if social assistance payments are at least 25 per cent of total income. Rents range from $145-$215 for seniors and from $245 (unserviced units) to $335 (fully serviced units) for families.	32.6	34.2
Saskatchewan	Social assistance recipients charged the minimum rent ($110-$135).	14.1	10.1
Alberta	Separate scale used for social assistance recipients (25 per cent of S.A.). Rents range between $113-$302 for single parents and between $182-$353 for two parent families.	29.7	17.7
British Columbia	Charged 43 per cent of social support allowance (equal to 30 per cent of total GAIN - Guaranteed Available Income for Need) excluding utilities and special allowances.	40.9	28.3
Yukon	Where earned income is less than $410 monthly rent is $300 (includes electricity), otherwise charged at GRS or Yukon scale (whichever applicable).	N/A	N/A
N.W.T.	Social assistance recipients charged the minimum rent ($32).	N/A	N/A

SOURCE: Provincial and Territorial Manuals, 1985 Compendium of Rent-to-Income Scales (CMHC), and Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

4. Shelter Costs Covered By Rental Charges

Rental charges are intended to be for fully serviced accommodation. This is defined as including water, hot water, heating, a refrigerator and a stove. In some cases, however, tenants are provided with unserviced units and are required to make their own payments for utilities and provide their own appliances. Where tenants are required to pay for their own utilities, the Federal Graduated Rent Scale prescribes that estimated utility costs are to be deducted from the monthly rental charge. A nominal deduction is also prescribed where a refrigerator and stove are not supplied with the unit ($1 monthly for each appliance). Where amenities not included in the definition of fully serviced accommodation are provided (e.g. electricity for uses other than home heating and hot water, parking, cable T.V., etc.) a surcharge is generally applied.

Data obtained from the Survey of Public Housing Tenants indicate that only a small proportion of tenants pay additional charges for water, gas and oil (6.4, 5.5 and 0.4 per cent of tenants, respectively) (Table 10.5). A considerably higher proportion (one-third) of tenants reported paying their own electricity bills.

TABLE 10.5
INCIDENCE OF PUBLIC HOUSING CLIENTS REPORTING EXTRA PAYMENTS FOR WATER, GAS, OIL AND ELECTRICITY

PROVINCE/ TERRITORY	WATER PER CENT	WATER (n)	GAS PER CENT	GAS (n)	OIL PER CENT	OIL (n)	ELECTRICITY PER CENT	ELECTRICITY (n)
Newfoundland	0.7	(146)	3.2	(145)	3.3	(144)	95.2	(144)
P.E.I.	0.5	(195)	0.0	(195)	28.3	(196)	89.5	(185)
Nova Scotia	0.0	(192)	0.0	(190)	1.2	(190)	56.3	(188)
New Brunswick	0.2	(211)	0.0	(207)	0.0	(207)	20.3	(211)
Quebec	1.0	(425)	0.2	(423)	0.0	(421)	15.7	(424)
Ontario	3.2	(608)	1.2	(616)	0.0	(617)	19.8	(612)
Manitoba	7.6	(133)	14.6	(132)	0.0	(13[illegible])	37.7	(131)
Saskatchewan	20.1	(177)	14.9	(167)	0.9	(176)	54.3	(163)
Alberta	34.0	(158)	32.5	(158)	0.3	(158)	71.7	(155)
British Columbia	3.6	(191)	10.1	(184)	0.4	(191)	72.9	(185)
Yukon	-	(20)	-	(21)	-	(20)	-	(19)
N.W.T.	-	(23)	-	(23)	-	(23)	-	(21)
CANADA	6.4	(2479)	5.5	(2461)	0.4	(2475)	33.3	(2438)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and N.W.T.

Provincial and territorial differences in utility allowances and amenity surcharges can be substantial and introduce another source of variation in rental charges assessed for public housing units in different parts of the country. The manner in which deductions and surcharges for utilities are assessed varies among provinces and territories (see Table 10.6). In some jurisdictions, a fixed allowance for items like heat and hot water is established, while in other jurisdictions allowances are sensitive to unit size, type of heating system, building type and location. In both cases, if utility consumption exceeds the amount of the rent deduction tenants are responsible for paying the difference. In some cases, actual costs are assessed (or estimated by prorating bulk consumption) and are deducted from rent.

In some provinces and territories, items not normally considered to fall under the definition of "fully serviced accommodation" are provided without charge to the tenant. For example, the Northwest Territories and Yukon allow consumption of electricity up to a specified maximum, with the tenant covering the cost of any extra consumption. In New Brunswick, a surcharge for electricity is applied to the rent charged to family clients, but is not assessed for senior clients. Surcharges for electricity are based on actual consumption in Prince Edward Island, Alberta and British Columbia. Surcharges applied in the remaining provinces ranged from $7 (in Newfoundland) to $40 (family clients in Nova Scotia) in 1987.

TABLE 10.6
RENT DEDUCTIONS AND SURCHARGES FOR UTILITIES

PROVINCE/ TERRITORY	HEAT*	WATER*	HOT WATER*	ELECTRICITY**
Newfoundland	$16 plus additional allowance of $30-$60.	Estimated local costs.	$4	$7-$10
Prince Edward Island	$40-$45 (oil heat) $50-$55 (electrical) (includes hot water).	None	Included in heating deduction.	Prorated from bulk meters (in 1987 average was $27).
Nova Scotia	$50	$3	$8	Families: $40 Seniors: $20
New Brunswick	$10	Estimated local costs.	$3	Families: $25-$37 Seniors: No charge
Quebec	None	None	None	Bach. units - $17.85 1 Bed units - $20.20 $2.35 per extra bed.
Ontario	$46-$52	$11	$16	Families: $14 Seniors: $6
Manitoba	$32-$86	None	None	Families: $17-$34 Seniors: $9-$10
Saskatchewan	$50 (includes heat, water and sewer).	Included in single charge.	Included in single charge.	$12 minimum.
Alberta	Estimated local costs.	Estimated local costs.	Estimated local costs.	Actual, or prorated from bulk meter.
British Columbia	Tenant pays directly.	Included.	Tenant pays directly.	Actual, or prorated from bulk meter.
Yukon	Fuel oil consumption above 1,300 gallons annually charged to family clients outside Whitehorse at cost.	None	None	$20-$30 in Whitehorse. Elsewhere, a set amount of Kwh is provided free.
Northwest Territories		$10 charge for water and sewer in Inuvik.	None	No charge up to pre-set maximum, above which user pays.

SOURCE: Provincial and Territorial Manuals, Interim Report of the F/P/T Subcommittee on Conservation and the Maintenance of the Existing Stock and the Reduction of Operating Costs (August, 1987) and 1985 Compendium of Rent-to-Income Scales (CMHC).

NOTE: * Deductions from rent where service not covered by rent charge.
** Surcharge added to rent.

5. Adjustment of Incomes for Rent Determination

Another source of variation in rent determination schemes among provinces and territories is the precise definition of income against which rent is assessed through the use of payment-to-income ratios. Under the Federal Graduated Rent Scale, certain sources of income are wholly or partially exempted in the calculation of income for rent determination purposes. Prior to calculation of the appropriate rental charge, gross household incomes are adjusted so as to exclude:[1]

1. Earnings of children in regular attendance at recognized institutions of learning (funds for tuition, such as scholarships, bursaries and contributions from non-resident family members);
2. Living out or travelling allowances of a family head;
3. Earnings of a working spouse (up to $900 per annum);
4. Income from any source other than social assistance payments of a one-parent family up to $900 per annum;
5. Earnings in excess of $75 per month for all family members other than the family head or spouse;
6. Capital gains (such as insurance settlements, inheritances, disability awards, or sale of effects); and
7. Family allowances.

For the most part, provincial and territorial scales involve a more detailed income adjustment procedure than that prescribed under the Federal GRS. The principal provincial and territorial variations in income adjustment practices are presented in Table 10.7. Like the GRS, typical deductions include a portion of the income of working spouses and dependents. Differences of a more substantive nature are also apparent, however. For example, two provinces (Quebec and Ontario) allow childcare expenses to be deducted from income. In addition, several provinces and territories (i.e. Ontario, British Columbia, and the Yukon) impute income from non-income producing assets for inclusion in adjusted income calculations.

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[1] 1985 Compendium of Rent-To-Income Scales, CMHC.

TABLE 10.7
PRINCIPAL VARIATIONS IN INCOME ADJUSTMENTS FOR RENT DETERMINATION PURPOSES

PROVINCE/ TERRITORY	PRINCIPAL VARIATIONS IN INCOME ADJUSTMENTS FOR RENT DETERMINATION PURPOSES
Newfoundland	Excluded: payments for the care of foster children.
Prince Edward	Included: social assistance payments (including rent and heat allowances), first $5,800 in annual income of each dependent aged 25 years or less. Excluded: the first $1,000 of income of all dependents who are not in full-time school attendance, work-related earnings of a single parent, working spouse, or any other household member including children up to $1,000 per year per qualifying household member, interest from RRSPs (unless withdrawn from the plan), alimony or child support paid to an ex-spouse and/or children not residing in a family housing project.
Nova Scotia	Included: social assistance supplement, payments for the care of foster children up to $100 per month per child. Excluded: first $1,800 of annual income of working spouse, income in excess of $400 per month of family members other than household head or spouse.
New Brunswick	Included: social assistance payments. Excluded: payments for the care of foster children.
Quebec	Included: 90 per cent of gross household income, social assistance payments (except supplements where the applicant earns less than the base income). Excluded: payments arising from legal judgements against claimants, long term hospitalization costs, childcare costs, Quebec baby bonus, payments from social programs (i.e. social handicapped allowance for special needs).
Ontario	Included: income imputed from non-income producing assets, grants and scholarships. Excluded: employment expense of $42 per month (for seniors, employed applicants and those receiving UI payments), child care expenses ($167 per month per child).
Manitoba	Included: payments for the care of foster children (if over one-third of total family income), social assistance supplement if 25 per cent or less of gross family income.

TABLE 10.7 (CONTINUED)
PRINCIPAL VARIATIONS IN INCOME ADJUSTMENTS FOR RENT DETERMINATION PURPOSES

PROVINCE/ TERRITORY	PRINCIPAL VARIATIONS IN INCOME ADJUSTMENTS FOR RENT DETERMINATION PURPOSES
Saskatchewan	Included: payments for the care of foster children (if over one-third of total family income). Excluded: earnings in excess of $200 per month of children under the age of 21 not in full-time school attendance.
Alberta	Excluded: $1,200 of income of employed spouse where at least one child present (or of income of single parent where not derived from social assistance), earnings in excess of $150 per month for family members other than household head or spouse, $50 in interest or income from assets, and Senior Citizen Renters Assistance Grant.
British Columbia	Excluded: $100 of monthly income for each working family member, income from first $3,000 of assets (remainder is subject to minimum return).
Yukon	Included: Social assistance payments, imputed rate of return from from non-income producing assets (set at the interest rate of the most recent CSB issue). Excluded: allowances for the care of foster children.
N.W.T.	Included: Social assistance payments. No deductions for part-time income.

SOURCE: Provincial and Territorial Manuals and 1985 Compendium of Rent-to-Income Scales (CMHC).

D. Housing Affordability

How affordable are public housing units? Table 10.8 presents data pertaining to the shelter costs of clients residing in public housing projects. Average monthly shelter costs range from $218 for bachelor units to $347 for units with four or more bedrooms. Under the Graduated Rent Scale, rents charged for public housing units are not to exceed 25 per cent of the household's income. However, as the previous section has demonstrated, some aspects of provincial and territorial rent scales do not ensure that rents are affordable to clients. For example, in some jurisdictions, rental charges are set at 30 per cent of income. In addition, fairly high minimum rental charges are in use in several provincial jurisdictions (ranging as high as $135 per month). Where rents are charged at a fixed rate without reference to client income, affordability is not explicitly assured as part of the rent determination process. This is also the case where utility deductions provided for unserviced units are less than actual expenditures.

TABLE 10.8
MONTHLY SHELTER COSTS OF PUBLIC HOUSING CLIENTS

MONTHLY SHELTER COSTS	BACHELOR	ONE BEDROOM	TWO BEDROOM	THREE BEDROOM	FOUR+ BEDROOM	ALL
Under $100	0.0	3.9	1.0	2.5	1.7	2.8
$100 - $199	35.2	25.1	35.7	17.1	13.1	25.1
$200 - $299	60.1	57.4	29.5	44.6	33.5	48.6
$300 - $399	4.3	10.2	25.4	18.8	20.7	14.6
$400 - $499	0.4	2.4	5.0	6.1	13.6	4.5
$500 or more	0.0	0.6	3.4	10.8	17.3	4.3
ALL	100.0	100.0	100.0	100.0	100.0	100.0
AVERAGE	$218	$228	$259	$296	$347	$254
Sample Size (n)	(117)	(1,145)	(402)	(612)	(193)	(2,672)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Includes payments made for rent, water, electricity, gas and oil.

1. Incidence of Affordability Problems

The core need indicator currently in use stipulates that a household has an affordability problem if it is required to spend 30 per cent or more of its household income on basic shelter costs for suitable and adequate housing. Basic shelter costs for renters include rent as well as payments for oil, gas, coal, wood or other fuels, electricity, water, sewerage and related costs.

Shelter-cost-to-income ratios for public housing clients are presented in Table 10.9. The data indicate that fully four-fifths of public housing client households spend 25 per cent or more of their household income on shelter, while one-third spend at least 30 per cent.

TABLE 10.9
SHELTER-COST-TO-INCOME RATIOS

RATIO OF SHELTER COSTS TO INCOME (PER CENT)	PER CENT OF HOUSEHOLDS	CUMULATIVE PER CENT
Under 5	0.0	0.0
5.0 - 9.9	0.2	0.2
10.0 - 14.9	1.4	1.6
15.0 - 19.9	6.9	8.5
20.0 - 24.9	11.1	19.6
25.0 - 29.9	45.8	65.4
30.0 - 34.9	16.4	81.8
35.0 - 39.9	8.3	90.1
40.0 - 44.9	2.7	92.8
45.0 - 49.9	2.8	95.6
50 or more	4.4	100.0
Sample Size (n)	(2,171)	

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Shelter costs include payments made for rent, water, electricity, gas and oil.

An earlier client survey, undertaken in 1981, also detected evidence of affordability problems among public housing clients. The Social Housing Review (Program Evaluation Division, CMHC, 1984 pg. 125) found that 45.5 per cent of clients had shelter costs in excess of 25 per cent of household income and 20.1 per cent reported shelter costs in excess of 30 per cent of income. The study noted that affordability problems were likely to have been over-estimated due to the possible under-reporting of income by survey respondents and to the fact that 1982 rents were being compared to 1981 incomes.

To assess the reliability of the analysis of housing affordability reported here, several supplementary analyses were undertaken to determine the sensitivity of the survey based estimate of the incidence of affordability problems to potential sources of error (e.g. under-reporting of incomes or over-reporting of rent charges by clients, lack of time concurrence of shelter cost and income data etc.). The results of these analyses provide different point estimates of the incidence of affordability problems which range between approximately one-fifth to one-third of client households.

The incidence of households spending 30 per cent or more of their household income on basic shelter costs is highest in British Columbia (77.8 per cent) and New Brunswick (73.1 per cent) (Table 10.10). The incidence of shelter-cost-to-income ratios of 30 per cent or more is considerably higher among family households (44.4 per cent) than seniors (25.4 per cent) and is particularly high among single parent families (49.3 per cent), couples with children (42.8 per cent) and "other" household types (53.2 per cent). "Other" households include those composed of unrelated persons or those where adult relatives other than parents are present. The proportion of income spent on shelter generally rises with increasing household size.

The incidence of shelter costs being equal to or greater than 30 per cent of household income was only marginally higher among social assistance recipients (37.7 per cent) than other households (33.1 per cent). However, because the income received by social assistance recipients is in part determined by the shelter component of social assistance benefits, shelter-cost-to-income ratios for this group may not reliably convey an indication of housing affordability. More detailed information concerning shelter-cost-to-income ratios for social assistance recipients is provided in Appendix E.

2. Magnitude of Affordability Problems

The foregoing analysis has documented the extent of affordability problems among public housing clients, measured in terms of the proportion of the client population affected. Another indicator of the magnitude of affordability problems considers the difference between actual shelter costs and each client's "affordability threshold" (i.e. 30 per cent of gross household income).

Table 10.11 compares actual shelter costs of households paying 30 per cent or more of household income for shelter against their "affordability thresholds" (30 per cent of gross household income). Among households experiencing affordability problems, the average difference between actual monthly shelter costs and affordability thresholds is $60. In other words, their current shelter expenditures exceed 30 per cent of gross monthly household income by an average of $60. The largest average differences are observed in Manitoba ($121) and Prince Edward Island ($109).

In most cases, the difference between actual and affordable shelter costs is not large. For over one-third of households with affordability problems, this difference is less than $25. For 60.2 per cent of households, the difference is less than $50. However, a minority of households experience considerably greater affordability problems. One-fifth of households experiencing affordability problems report differences between actual and affordable shelter costs of $100 or more.

TABLE 10.10
SHELTER-COST-TO-INCOME RATIOS BY SELECTED CHARACTERISTICS

	RATIO OF SHELTER COSTS TO HOUSEHOLD INCOME (PER CENT)				
	UNDER 25	25-29	30-34	35 OR MORE	SAMPLE SIZE (n)
PROVINCE/TERRITORY					
Newfoundland	21.8	24.1	19.0	35.0	(129)
Prince Edward Island	4.6	41.8	20.2	33.4	(172)
Nova Scotia	7.1	50.2	20.5	22.2	(173)
New Brunswick	3.6	23.2	45.9	27.2	(165)
Quebec	10.5	57.5	14.9	17.1	(396)
Ontario	24.9	45.3	13.1	16.7	(529)
Manitoba	12.6	43.2	10.8	33.4	(112)
Saskatchewan	14.6	65.3	10.6	9.5	(148)
Alberta	28.8	38.7	25.1	7.4	(144)
British Columbia	10.4	11.8	42.0	35.8	(166)
Yukon	-	-	-	-	(19)
Northwest Territories	-	-	-	-	(18)
CLIENT TYPE					
Family	24.4	31.2	19.4	25.0	(882)
Senior	15.8	58.8	13.4	12.0	(1,086)
Family & Senior	16.2	45.1	19.2	19.5	(200)
SOURCE OF INCOME					
Social assistance	29.0	33.3	16.6	21.1	(697)
Other	14.6	52.3	16.3	16.8	(1,451)
HOUSEHOLD TYPE					
One person living alone	16.8	58.2	13.4	11.6	(1,037)
One adult with children	19.3	31.4	23.8	25.5	(472)
Couple with children	33.7	23.5	19.8	23.0	(269)
Couple without children	15.5	51.7	13.1	19.7	(197)
Other	9.9	36.9	10.0	43.2	(46)
HOUSEHOLD SIZE					
One person	17.0	57.8	13.6	11.6	(1,074)
Two persons	19.5	41.7	15.8	23.0	(403)
Three persons	20.2	35.5	22.0	22.3	(249)
Four persons	23.9	27.5	25.9	22.7	(218)
Five or more persons	27.4	23.4	17.9	31.3	(155)
ALL	19.6	45.8	16.5	18.1	(2,171)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Shelter costs include payments for rent, water, electricity, gas and oil. Insufficient cases were available for analysis in the Yukon and Northwest Territories.

TABLE 10.11
DIFFERENCE BETWEEN ACTUAL MONTHLY SHELTER COSTS AND AFFORDABILITY THRESHOLDS FOR HOUSEHOLDS WITH SHELTER-COST-TO-INCOME RATIOS OF 30 PER CENT OR GREATER BY PROVINCE

PROVINCE/ TERRITORY	PER CENT OF HOUSEHOLDS				AVERAGE ($)	SAMPLE SIZE (n)
	$1-$24	$25-$49	$50-$99	$100 OR MORE		
Newfoundland	25.5	15.1	29.2	30.2	70.25	(59)
P.E.I.	31.8	19.4	7.3	41.6	109.02	(63)
Nova Scotia	47.3	27.1	10.8	14.8	45.53	(56)
New Brunswick	45.4	35.2	15.6	3.8	35.62	(94)
Quebec	42.7	19.2	13.7	24.4	63.24	(103)
Ontario	37.6	20.8	25.0	16.6	57.28	(138)
Manitoba	8.7	13.9	18.1	59.3	121.14	(33)
Saskatchewan	44.1	10.2	33.3	12.3	46.98	(33)
Alberta	52.4	35.0	5.6	7.0	34.98	(45)
British Columbia	31.6	31.9	17.2	19.3	52.45	(111)
Yukon	-	-	-	-	-	(9)
N.W.T.	-	-	-	-	-	(4)
CANADA	38.0	22.2	19.1	20.7	59.83	(748)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and N.W.T.

3. Factors Contributing to Affordability Problems

Having identified the incidence and the magnitude (in dollar terms) of affordability problems among public housing clients, it is important to establish the factors contributing to this phenomenon. Table 10.12 compares average shelter costs and incomes for households with and without affordability problems. This analysis suggests that affordability problems stem from a combination of lower client incomes and higher shelter costs.

Clients paying 30 per cent or more of their household income for rent have lower average incomes (-$179) and, consequently, lower affordability thresholds (-$54) than do clients who reported paying less than 30 per cent of their income for shelter. Compounding the problem presented by lower incomes, are the higher shelter expenditures (+$58) reported by clients with affordability problems. The two components of shelter costs which are principally responsible for this difference are electricity and rent. Clients with affordability problems spend an average of $30 more on rent and $20 more on electricity than did clients with shelter cost-to-income ratios of less than 30 per cent.

TABLE 10.12
COMPARISON OF SHELTER EXPENSES FOR PUBLIC HOUSING CLIENTS (FOR HOUSEHOLDS WITH AND WITHOUT AFFORDABILITY PROBLEMS)

	RATIO OF SHELTER COSTS TO GROSS HOUSEHOLD INCOME		
	30 PER CENT OR MORE (AVE. $)	LESS THAN 30 PER CENT (AVE. $)	DIFFERENCE* (AVE. $)
Rent	258.60	228.39	30.21
Water	2.66	1.37	1.29
Electricity	29.38	9.16	20.22
Gas	5.98	1.73	4.25
Oil	0.80	0.02	.78
Total shelter cost	297.43	239.12	58.31
Monthly household income	792.00	970.89	-178.89
Affordability threshold (30 per cent of gross household income)	237.60	291.27	-53.67
Difference between shelter cost and affordability threshold	59.82	-49.63	
Sample Size (n)	(748)	(1,078)	

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: * All differences are statistically significant at the 99 per cent confidence level.

4. Impact of Provincial and Territorial Rent Scales on Housing Affordability

The preceding sections have demonstrated that considerable variation exists in the procedures used to calculate rental charges across the public housing portfolio. Collectively, provincial and territorial differences in rent-to-income ratios, use of minimum and maximum rents, treatment of social assistance recipients, assessment of deductions and surcharges and adjustment of incomes for rent determination purposes have an impact on the affordability of public housing units in different parts of the country. The following analysis attempts to measure the impact of these differences, by comparing the charges for fully serviced accommodation reported by clients against an estimate of the rent charge that would be assessed if the criteria incorporated in the Federal Graduated Rent Scale were strictly applied.

Expenditures for fully serviced accommodation have been estimated by summing payments for rent, water, gas and oil reported by respondents to the client survey. The survey data do not allow for the separation of electricity charges for heat and hot water (included in the definition of fully serviced accommodation) from those associated with general domestic electricity consumption. For the purpose of this analysis, all electricity expenditures have been excluded from the calculation expenditures for fully serviced accommodation. This will result in an under-estimation of actual expenditures in cases where electricity is used for heating or hot water.

The survey data do not permit an exact adjustment of client incomes using the Federal Graduated Rent Scale (GRS) criteria. For the purpose of this analysis, several assumptions have been made in the adjustment of gross household incomes and the calculation of the commensurate rent under the GRS. Where a working spouse is present or where single parent families receiving social assistance also report income from other sources, the maximum deduction was applied ($75 per month in each case). This may result in an under-estimation of the GRS rent in cases where the household would not be eligible for the maximum deduction. However, a sensitivity analysis which assumed half the maximum deduction produced only nominally different results. Family allowance payments were also deducted, based on the number of children reported.

The survey data do not permit the adjustment of incomes to exclude: 1) earnings of children in full time school attendance; 2) living out or travelling allowances of family heads; 3) earnings of family members other than the head or spouse; and 4) capital gains. This will result in an over-estimation of GRS rents for households which would be eligible for the adjustment of gross income on these grounds.

This analysis suggests that just over three-quarters of public housing clients pay more for fully serviced accommodation than they would if they were charged rents calculated according to the criteria established in the Federal Graduated Rent Scale (GRS) (Table 10.13). The proportion of clients paying in excess of the GRS rent ranges from 50.8 per cent in Newfoundland to 98.6 per cent in New Brunswick. On average, actual monthly charges for fully serviced accommodation reported by respondents to the client survey are $27.7 higher than estimated GRS rents. Only in Newfoundland was there no statistically significant difference between average reported shelter expenditures and estimated GRS rents. In the remaining provinces and territories, the average difference between actual rent charges and estimated GRS rents ranges from a low of $13.5 in Saskatchewan to a high of $65.7 in

Prince Edward Island. The largest average differences are observed in Prince Edward Island ($65.7), New Brunswick ($64.3) and Manitoba ($57.1).

The data indicate that a substantial proportion of clients living in jurisdictions which use the Federal GRS report expenditures on rent, water, gas and oil which exceed the rental charge estimated by applying the GRS criteria to their reported household incomes. This is particularly the case in Newfoundland, Nova Scotia, and Manitoba. There are a number of potential explanations for this apparent anomaly. In most provinces which use the GRS scale, an exception is made in the case of social assistance recipients who are charged rents based on a separate scale. Social assistance recipients constitute almost one-half of all public housing clients in Newfoundland and one-third of client households in Manitoba.

Clients may also pay in excess of GRS rents if their expenditures on water, gas and oil are greater than the utility allowance deducted from the rent for unserviced accommodation. In this analysis, the estimated charge for fully serviced accommodation covered the total expenditures on rent, water, gas and oil reported by the client. In practice, however, most jurisdictions do not deduct actual expenditures on these utilities from rent, but instead deduct a standard "allowance" for heat, water and hot water. In addition, if rents reported by clients include surcharges for amenities not covered by the definition of fully serviced accommodation (electricity consumed for purposes other than heating or hot water, parking, cable T.V, etc.), then their reported rent will be higher than the estimated GRS rent.

Finally, if a tenant does not immediately report a drop in income and request a rent abatement they will be paying a higher rent than the GRS rent estimated in this analysis. The same is true if a rent abatement has been requested but not yet processed. Rent abatements are generally implemented no earlier than the month following the change in household circumstances and may take longer if processing is slow (due to verification of income, etc.).

It is not possible to determine with certainty the precise factors responsible for differences between actual rents and those prescribed under the Federal Graduated Rent Scale. It can be concluded from the foregoing analysis, however, that components of provincial and territorial rent scales do allow for rental charges in excess of the Federal GRS and that corresponding differences are reflected in the rent data collected through the Survey of Public Housing Tenants.

TABLE 10.13
REPORTED MONTHLY SHELTER EXPENDITURES [1] VS. THE FEDERAL GRADUATED RENT SCALE

COMPONENTS OF THE PORTFOLIO	CLIENTS REPORTING SHELTER EXPENDITURES[1] HIGHER THAN ESTIMATE OF GRS RENT (PER CENT)	DIFFERENCE BETWEEN REPORTED MONTHLY EXPENDITURES AND ESTIMATE OF GRS RENT[2] (AVERAGE $)	SAMPLE SIZE (n)
PROVINCE/TERRITORY			
Newfoundland	50.8	0.1*	(110)
Prince Edward Island	89.2	65.7	(166)
Nova Scotia	82.0	23.1	(150)
New Brunswick	98.6	64.3	(131)
Quebec	91.7	45.4	(342)
Ontario	73.9	23.2	(449)
Manitoba	88.1	57.1	(98)
Saskatchewan	71.1	13.5	(138)
Alberta	58.3	20.5	(132)
British Columbia	85.3	39.6	(149)
Yukon	-	-	(17)
Northwest Territories	-	-	(4)
CLIENT TYPE			
Family	70.5	30.4	(745)
Senior	80.5	24.0	(972)
Family & Senior	83.1	36.7	(177)
SOURCE OF INCOME			
Social Assistance	67.1	21.0	(588)
Other	81.3	30.8	(1,289)
RENT-TO-INCOME RATIO			
Under 30 per cent	67.2	-0.6*	(1,129)
30 per cent or more	96.6	84.3	(719)
ALL	76.7	27.7	(1,896)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: [1] Shelter expenditures include payments for rent, water, gas and oil, but not electricity. See discussion on page 139 for a description of the assumptions used in the estimation of GRS rents.

[2] Unless noted (*) all differences are statistically significant at the 99 per cent confidence level.

Insufficient cases were available for analysis in the Yukon and N.W.T.

E. Core Need

The core housing need indicator incorporates three dimensions of need (housing affordability, adequacy and suitability). A household is in core need if it has insufficient income to obtain adequate and suitable housing without experiencing an affordability problem. The determination of whether a household has sufficient income to obtain suitable and adequate housing within their local area is made by comparing the household's income to the applicable core need income threshold.

The incidence of affordability problems among public housing tenants has been documented in the previous sections. The second component of core need is housing inadequacy. One of the central objectives of the public housing program is that of providing adequate housing. The indicator of housing adequacy currently incorporated in the core need indicator is the "need for major repairs".

The third component of core housing need is housing suitability. The stated objectives of the Section 81/82 Public Housing Program are to provide housing which is suitable to the identified needs of program clients. While the statement of objectives for the Section 79 F/P Public Housing Program do not make explicit reference to the provision of "suitable" housing, this can be taken to be an implicit objective.

Under the National Occupancy Standard, the suitability of dwelling units is determined by comparing the number of bedrooms available, to the number, age and sex of household members residing in the dwelling unit. In order to meet the National Occupancy Standard a dwelling must have a sufficient number of bedrooms to allow:

- parents to have access to a bedroom separate from their children;
- household members aged 18 years or more to have access to a separate bedroom unless married or otherwise co-habiting as spouses; and
- dependents aged five years or over of the opposite sex not to be required to share a bedroom.

Using the data collected through the client survey, an assessment has been made of the suitability of the dwellings occupied by program clients. Bachelor or studio apartments have been assumed to be equivalent to one bedroom units for the purpose of assessing whether the National Occupancy Standard has been met. The results of this analysis indicate that 4.8 per cent of client households currently occupy units which are unsuitable under the terms of the National Occupancy Standard.

Estimates of the incidence of core need among public housing clients are presented in Table 10.14. This analysis estimates that 39.9 per cent of client households remain in core need despite the assistance provided to them under the public housing program. The principal problem experienced is one of housing affordability (basic shelter costs constituting 30 per cent or more of household income). Fully 80.9 per cent of client households who are estimated to be in core need have affordability problems (either affordability alone or in conjunction with other problems).

TABLE 10.14
CORE NEED AMONG PUBLIC HOUSING CLIENTS

PROBLEM	INCIDENCE	PROPORTION OF TOTAL
Affordability only	25.3	63.6
Adequacy only	5.5	13.9
Suitability only	1.8	4.5
Affordability and adequacy	4.8	12.1
Affordability and suitability	1.4	3.4
Adequacy and suitability	0.3	0.7
Affordability, adequacy and Suitability	0.7	1.8
ALL	39.9	100.0
Sample Size (n)	(889)	

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

The estimated incidence of core need is highest in British Columbia (71.8 per cent) and New Brunswick (68.9 per cent) and is roughly twice as high among residents of family projects as residents of seniors projects (Table 10.15). Social assistance recipients had a higher incidence of being in core need (46.8 per cent) than did other households (36.8 per cent). Among household types, the highest incidence of core need is found among single parent families (56.4 per cent), couples with children (55.2 per cent) and "other" household types (57.1 per cent). The incidence of core need increases with household size.

TABLE 10.15
INCIDENCE OF CORE NEED AMONG PUBLIC HOUSING CLIENTS BY SELECTED CHARACTERISTICS

CHARACTERISTICS	PER CENT OF HOUSEHOLDS IN CORE NEED	SAMPLE SIZE (n)
PROVINCE/TERRITORY		
Newfoundland	61.0	(129)
Prince Edward Island	52.7	(156)
Nova Scotia	43.3	(169)
New Brunswick	68.9	(157)
Quebec	34.3	(372)
Ontario	38.2	(473)
Manitoba	51.3	(84)
Saskatchewan	20.6	(166)
Alberta	37.0	(138)
British Columbia	71.8	(153)
Yukon	-	(19)
Northwest Territories	-	(20)
CLIENT TYPE		
Family	51.4	(906)
Senior	27.4	(942)
Family & Senior	42.2	(186)
SOURCE OF INCOME		
Social assistance	46.8	(688)
Other	36.8	(1,321)
HOUSEHOLD TYPE		
One person living alone	27.6	(910)
One adult with children	56.4	(506)
Couple with children	55.2	(283)
Couple without children	32.1	(195)
Other	57.1	(51)
HOUSEHOLD SIZE		
One person	27.4	(943)
Two persons	42.7	(415)
Three persons	50.2	(276)
Four persons	54.0	(230)
Five or more persons	63.7	(167)
ALL	39.9	(2,036)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

F. Summary

The public housing program is well targeted to low-income households, with 96.1 per cent of client households reporting incomes equal to or below the appropriate core need income threshold for the area in which they live. Under the Federal Graduated Rent Scale, rents are calculated on a sliding scale which ranges from 16.7 to 25 per cent of adjusted household income, subject to a minimum monthly charge of $28 per month.

Provinces and territories are permitted to use their own rental scale. As a result, significant variations exist among provinces and territories in terms of the rent-to-income ratio used to set rents, provisions for minimum and maximum rents, the use of special scales or flat payments for particular client groups (i.e. social assistance recipients), the definition of household income used in the calculation of rental charges, the size of rent deductions assessed where clients pay for their own heat, water or hot water and the magnitude of surcharges applied where additional amenities are provided (e.g. parking, cable T.V., etc.).

Just over one-third of all public housing clients spend at least 30 per cent of their gross household income on shelter. Among those with affordability problems, the average difference between actual monthly expenditures and 30 per cent of income is $60. For over one-third of these households, the difference is less than $25. Clients with affordability problems had lower household incomes, higher rents and higher expenditures on electricity than did households which spent less than 30 per cent of household income on basic shelter costs.

Overall, 39.9 per cent of households surveyed remain in core need, despite the assistance provided through the public housing program. Approximately two-thirds of those identified as being in core need are experiencing affordability problems alone (i.e. basic shelter costs equal to or greater than 30 per cent of their income). A further 13.9 per cent reported that their unit was only in need of major repairs. Only 4.5 per cent were identified as having suitability problems alone. Approximately one-fifth experienced multiple problems (ie. combinations of affordability, adequacy and suitability problems). The incidence of public housing residents in core need was highest in British Columbia (71.8 per cent) and New Brunswick (68.9 per cent). The incidence of core need among family households was almost double that estimated for seniors. The incidence of core need is highest among single parent families, couples with children and large households.

Provincial and territorial variations in rental scales have an impact on the relative affordability of public housing provided to clients residing in different parts of the country. Just over three-quarters of client households pay more for fully serviced accommodation than the rent applicable under the Federal Graduated Rent Scale. The average difference between reported monthly rents and estimated GRS rents is just under $30.

XI CLIENT SATISFACTION AND THE QUALITY OF LIFE

A. Introduction

This chapter assesses the degree to which clients are satisfied with the Public Housing Program and examines the broader social environment and quality of life provided in public housing projects. A range of issues are examined in this context, including: the nature of prior housing conditions of public housing clients; their reasons for moving to public housing; comparisons of their current and prior housing conditions; levels of client satisfaction with their dwellings, projects and communities; problems with crime; the relationships between residents of public housing projects and the surrounding communities; and the degree to which public housing is serving as temporary or more long-term accommodation.

B. Improvements in Housing Conditions

One measure of the success of the program is the extent to which it has improved the living conditions of clients. The majority of public housing residents were previously housed in either the private rental market (45.0 per cent) or the private ownership market (23.3 per cent) (Table 11.1). Seniors clients were twice as likely to have moved to public housing from ownership housing than were family clients. Approximately one-fifth of client households moved to their current unit from a different public housing project, or another unit in the same project.

High rental costs was the most commonly reported reason for moving to public housing, cited by 57 per cent of respondents as being either "somewhat" or "very" important reasons for their move (Table 11.2). Inadequate dwelling size was the second most frequent reason given (44.4 per cent). Other frequently cited reasons were the poor state of repair of their dwelling (35.4 per cent) and the need to establish their own household (33.9 per cent).

Family and senior citizen clients share many of the same reasons for moving to public housing. However, inadequate space was cited with greater frequency by family clients as being an important factor in their decision to move. Moving in response to infirmity or disability was more prevalent among senior citizen clients than family clients, as was the desire to be near friends and family.

TABLE 11.1
NATURE OF HOUSING OCCUPIED PRIOR TO MOVING TO CURRENT UNIT

TYPE OF HOUSING	FAMILY PROJECTS	SENIORS PROJECTS	ALL PROJECTS
Private rental	48.0	40.9	45.0
Privately owned	14.8	31.1	23.3
Different public housing project	12.6	12.5	12.4
Same project, different unit	12.9	4.6	8.2
Non-profit or Co-op housing	1.4	1.5	1.5
Other type of assisted housing	0.5	0.1	0.4
No permanent shelter			
Hospital, friends or family	8.2	7.0	7.4
Homeless or in shelter	1.1	0.3	0.6
Other	0.5	2.0	1.2
ALL	100.0	100.0	100.0
Sample Size (n)	(1,022)	(1,250)	(2,490)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

TABLE 11.2
REASONS FOR MOVING INTO PUBLIC HOUSING

	FAMILY PROJECTS		SENIORS PROJECTS		ALL PROJECTS	
REASONS FOR MOVING	PER CENT	(n)	PER CENT	(n)	PER CENT	(n)
Poor state of repair	35.4	(842)	32.8	(751)	35.4	(1,764)
Unit too large	15.2	(807)	21.0	(740)	18.0	(1,710)
Unit too small	58.4	(861)	25.4	(712)	44.4	(1,741)
Rental costs too high	57.7	(861)	54.4	(844)	57.1	(1,878)
Too much crime/vandalism	25.5	(827)	20.4	(706)	23.6	(1,696)
Lack of shopping, recreation or health care	24.8	(821)	31.8	(724)	28.4	(1,711)
Moved to be near friends or family	15.4	(819)	34.0	(758)	24.2	(1,741)
Infirmity or disability	14.3	(818)	32.6	(789)	23.6	(1,774)
Evicted from unit	5.2	(800)	3.4	(682)	4.8	(1,640)
Needed to establish own household	36.6	(813)	30.6	(727)	33.9	(1,700)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Reasons cited by clients as being either somewhat or very important in their decision to leave their previous residence.

Having applied for a public housing unit, the majority of clients were allocated a unit within six months (61.3 per cent) (Table 11.3). Fully 78 per cent of respondents reported that they obtained a unit within one year of application. The shortest waiting periods were recorded in Alberta, where 68.3 per cent of respondents reported being allocated a unit within 3 months. The incidence of long waiting periods (over 2 years) was highest in British Columbia (20.9 per cent), Quebec (19.6 per cent), New Brunswick (18.7 per cent), and Newfoundland (17.7 per cent).

TABLE 11.3
LENGTH OF WAITING PERIOD

	PER CENT OF CLIENT HOUSEHOLDS BY LENGTH OF WAITING PERIOD					
	UNDER 3 MONTHS	**3 - 6 MONTHS**	**6 - 12 MONTHS**	**1 - 2 YEARS**	**OVER 2 YEARS**	**SAMPLE SIZE (n)**
PROVINCE/TERRITORY						
Newfoundland	37.5	14.8	21.1	8.9	17.7	(133)
P.E.I.	41.8	20.6	13.2	12.6	11.8	(190)
Nova Scotia	29.8	22.1	17.7	15.5	14.9	(183)
New Brunswick	40.0	15.2	11.4	14.7	18.7	(193)
Quebec	31.2	15.9	18.1	15.2	19.6	(392)
Ontario	32.1	28.9	20.2	8.3	10.5	(593)
Manitoba	37.5	27.3	12.8	18.3	4.1	(130)
Saskatchewan	45.7	28.5	15.1	6.9	3.8	(180)
Alberta	68.3	21.0	4.2	1.7	4.3	(168)
B.C.	43.2	14.1	7.6	14.3	20.9	(173)
Yukon	-	-	-	-	-	(21)
N.W.T.	-	-	-	-	-	(18)
CLIENT TYPE						
Family	33.9	23.0	19.9	11.5	11.8	(965)
Senior	39.8	26.4	14.0	8.9	11.0	(1,205)
Family & Senior	34.5	17.4	17.8	13.9	16.4	(196)
ALL	36.9	24.4	16.7	10.4	11.6	(2,374)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.
NOTE: Insufficient cases for analysis in the Yukon and N.W.T.

In comparing their current housing unit to the one they occupied previously, the majority of respondents cited improvements in rental costs (67.1 per cent), dwelling size (64.3 per cent), state of repair (56.6 per cent) and privacy/independence (53.0 per cent) (Table 11.4). These are areas which most closely conform to formal program objectives (affordable, suitable and adequate housing). Improvements in dwelling size are particularly prominent among family clients. The Public Housing Program has also been relatively successful in terms of providing housing in locations which either maintain or improve access to facilities and services and to clients' established social networks (friends and family).

TABLE 11.4
COMPARISON OF CURRENT TO PRIOR CONDITIONS

ASPECT	MUCH WORSE	SAME	MUCH BETTER	SAMPLE SIZE (n)
ALL PROJECTS				
State of repair	5.8	37.6	56.6	(1,889)
Size of apartment	9.5	26.2	64.3	(1,869)
Rental costs	5.6	27.3	67.1	(1,890)
Crime/vandalism problems	24.8	44.3	30.9	(1,183)
Closeness to shopping & recreational facilities	6.9	48.6	44.5	(1,855)
Closeness to friends & family	8.4	56.7	34.9	(1,561)
Privacy or independence	8.7	38.3	53.0	(1,832)
FAMILY PROJECTS				
State of repair	10.7	39.4	49.9	(852)
Size of apartment	8.5	19.0	72.5	(892)
Rental costs	6.2	27.7	66.1	(863)
Crime/vandalism problems	35.6	42.8	21.6	(626)
Closeness to shopping & recreational facilities	7.2	55.2	37.6	(824)
Closeness to friends & family	10.8	62.9	26.4	(683)
Privacy or independence	11.6	37.6	50.8	(829)
SENIORS PROJECTS				
State of repair	1.4	35.3	63.3	(854)
Size of apartment	10.8	33.2	56.1	(796)
Rental costs	4.3	28.3	67.4	(847)
Crime/vandalism problems	6.1	48.1	45.9	(437)
Closeness to shopping & recreational facilities	6.3	42.9	50.9	(860)
Closeness to friends & family	6.8	50.0	43.3	(738)
Privacy or independence	3.4	40.2	56.4	(835)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

The Public Housing Program has been less successful in generating improvements in terms of providing safe environments. When comparing their current dwelling to the one they occupied previously, almost one-quarter of survey respondents reported worse conditions with respect to crime and vandalism, only slightly less than the proportion citing improvements (30.9 per cent). Among family clients, a greater proportion cited worse crime and vandalism conditions (35.6 per cent) than improvements (21.6 per cent).

C. Client Satisfaction

Client satisfaction represents a further indicator of the performance of the Public Housing Program. Client satisfaction has been measured on several levels ranging from the dwelling unit to the project and the surrounding community. Responses to a question concerning overall satisfaction indicate that the majority of public housing clients are satisfied with their homes. Fully 87.4 per cent of respondents stated that they were either somewhat or very satisfied with their dwelling units and the nearby area. The level of satisfaction reported by public housing clients compares favourably with that reported in a survey of renter households in general (Table 11.5).

TABLE 11.5
OVERALL SATISFACTION RATINGS
PUBLIC HOUSING CLIENTS VS. ALL RENTER HOUSEHOLDS

SATISFACTION RATING	PUBLIC HOUSING CLIENTS	ALL RENTER HOUSEHOLDS	ALL HOUSEHOLDS
Very satisfied	55.0	33.3	54.5
Somewhat satisfied	32.4	43.5	32.3
Somewhat dissatisfied	10.2	13.1	8.1
Very dissatisfied	2.4	10.1	5.1
Sample Size (n)	(2,658)	(661)	(2,006)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; and Focus Canada Survey, Environics Research Group, January, 1989.

NOTE: The Survey of Public Housing Tenants questioned public housing residents about their overall satisfaction with their homes (including "everything about their dwelling and nearby area"). The Focus Canada Survey questioned people about their satisfaction with their "current housing conditions".

Over one-half (55.0 per cent) of public housing clients reported that they were very satisfied with their homes, compared with only one-third of renter households in general. At the other end of the scale, only 12.6 per cent of public housing clients reported that they were dissatisfied with their homes, compared with 23.2 per cent of renter households in general. The level of satisfaction expressed by public housing clients more closely corresponds with that expressed by all households (renters and owners).

Client satisfaction levels for different components of the portfolio are presented in Table 11.6. No pronounced differences in levels of client satisfaction are evident among the two programs. Public housing clients in New Brunswick, Newfoundland, Ontario, Nova Scotia and Manitoba expressed the greatest overall dissatisfaction with their dwellings and nearby areas. Marked differences are apparent in the level of satisfaction expressed by different client types. Fully 95.6 per cent of residents of seniors projects expressed satisfaction with their dwellings and nearby areas compared to 79.2 per cent for family projects and 80.6 per cent for mixed family/senior projects.

Among age categories, the greatest dissatisfaction was expressed with projects completed between 1964 and 1969 (24.2 per cent). Increasing levels of satisfaction were observed among residents of newer projects. Other components of the portfolio with the highest incidence of dissatisfied clients were projects with a mixture of building types, both with high rises (23.9 per cent) and without high rises (20.4 per cent); projects with under 10 units (21.5 per cent) and projects located in cities with 100,000 or more population (16.7 per cent).

The data presented in Table 11.7 provide a more detailed indication of the level of client satisfaction with various aspects of their homes and living environments. On the whole, clients expressed high levels of satisfaction, ranging from a low of 80.6 per cent (for the way projects are run) to a high of 91.2 per cent (with respect to the surrounding area and community).

Benchmark data from a survey of the general population indicate that the proportion of public housing clients that were satisfied or very satisfied with dwelling interiors, the way projects are run and the nearby community are similar to those reported by the general renter population (83, 81 and 91 per cent, respectively). The only difference of note is that a higher proportion of renters reported the highest level of satisfaction (very satisfied) than did residents of public housing projects.

In general, families expressed higher levels of dissatisfaction than did seniors. The largest disparity between these two groups can be observed with respect to project grounds where the incidence of dissatisfaction for families was almost five times as great as that for seniors.

TABLE 11.6
OVERALL CLIENT SATISFACTION RATINGS

COMPONENT OF THE PORTFOLIO	PER CENT DISSATISFIED	PER CENT SATISFIED	SAMPLE SIZE (n)
PROGRAM			
Section 79	14.7	85.3	(964)
Section 81/82	12.1	87.9	(1,694)
PROVINCE/TERRITORY			
Newfoundland	15.8	84.2	(155)
Prince Edward Island	5.7	94.3	(201)
Nova Scotia	15.0	85.0	(206)
New Brunswick	18.3	81.7	(228)
Quebec	7.7	92.2	(440)
Ontario	15.1	84.9	(666)
Manitoba	14.3	85.7	(141)
Saskatchewan	3.6	96.4	(193)
Alberta	7.5	92.5	(176)
British Columbia	11.8	88.2	(206)
Yukon	-	-	(19)
Northwest Territories	-	-	(27)
CLIENT TYPE			
Family	20.8	79.2	(1,110)
Senior	4.4	95.6	(1,313)
Family & Senior	19.4	80.6	(226)
PROJECT AGE			
Pre-1964	18.7	81.3	(214)
1964-1969	24.2	75.8	(290)
1970-1974	13.2	86.8	(926)
1975-1979	9.0	91.0	(844)
1980-1987	9.0	91.0	(384)
BUILDING TYPE			
Detached, Semi & Row	17.5	82.5	(782)
Low rise	3.6	96.4	(541)
High rise	10.6	89.4	(929)
Mixed (no high rise)	20.4	79.6	(209)
Mixed (with high rise)	23.9	76.1	(197)
PROJECT SIZE (UNITS)			
Under 10	21.5	78.5	(106)
10 - 49	8.8	91.2	(757)
50 - 99	10.5	89.5	(386)
100 - 199	13.3	86.7	(817)
200 or more	16.2	83.8	(592)
MUNICIPALITY SIZE			
Under 2,500	5.4	94.6	(222)
2,500 - 9,999	11.6	88.4	(308)
10,000 - 29,999	8.9	91.1	(365)
30,000 - 99,999	5.6	94.4	(517)
100,000 - 499,999	16.7	83.3	(721)
500,000 or more	16.7	83.3	(525)
ALL	12.6	87.4	(2,658)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

TABLE 11.7
DETAILED CLIENT SATISFACTION RATINGS

ITEM	NOT SATISFIED	SATISFIED	VERY SATISFIED	SAMPLE SIZE (n)
ALL PROJECTS				
Dwelling interiors	13.4	61.4	25.2	(2,635)
Project buildings	12.1	67.9	20.0	(2,446)
Project grounds	14.8	60.0	25.2	(2,530)
Way project is run	19.4	59.0	21.6	(2,425)
Rent-to-income	12.6	66.1	21.3	(2,546)
Nearby area/community	8.8	65.1	26.1	(2,473)
Shopping, health care etc.	13.1	55.0	31.9	(2,555)
FAMILY PROJECTS				
Dwelling interiors	17.8	65.1	17.1	(1,097)
Project buildings	18.8	67.8	13.4	(1,027)
Project grounds	25.2	58.3	16.5	(1,052)
Way project is run	27.3	58.0	14.8	(1,003)
Rent-to-income	17.0	60.4	22.6	(1,073)
Nearby area/community	11.8	62.7	25.5	(1,036)
Shopping, health care etc.	14.2	52.1	33.7	(1,069)
SENIORS PROJECTS				
Dwelling interiors	9.2	57.9	32.9	(1,304)
Project buildings	4.9	68.3	26.8	(1,201)
Project grounds	5.3	60.9	33.8	(1,253)
Way project is run	11.5	60.2	28.3	(1,209)
Rent-to-income	8.8	70.2	21.0	(1,251)
Nearby area/community	4.8	67.0	28.2	(1,218)
Shopping, health care etc.	10.9	57.6	31.5	(1,261)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

As was reported earlier, one-fifth of all public housing clients expressed dissatisfaction with the way their projects are run. Table 11.8 presents further information regarding client satisfaction with project management. The data indicate that the aspects of project management which are associated with the highest incidence of dissatisfaction among clients are project security (26.2 per cent) and the speed with which tenant requests are dealt with by project staff (25.2 per cent).

With respect to the maintenance of grounds and common areas, security against crime and vandalism and the speed with which requests are handled by the property manager, overall satisfaction levels for public housing clients are similar to those recorded by renter households in general (Focus Canada Survey, Environics Research Group, January, 1989). A higher

TABLE 11.8
CLIENT SATISFACTION WITH PROJECT MANAGEMENT

ITEM	NOT SATISFIED	SATISFIED	VERY SATISFIED	SAMPLE SIZE (n)
ALL PROJECTS				
Maintenance of grounds	14.2	56.4	29.4	(2,550)
Repairing of unit	19.7	53.7	26.6	(2,573)
Security	26.2	52.1	21.7	(2,267)
Information (comm/social serv)	17.0	62.7	20.3	(2,023)
Information about project	18.9	63.5	17.6	(2,110)
Speed in handling requests	25.2	52.0	22.8	(2,446)
FAMILY PROJECTS				
Maintenance of grounds	20.3	59.9	19.8	(1,051)
Repairing of unit	31.6	50.1	18.3	(1,078)
Security	41.9	45.2	12.9	(909)
Information (comm/social serv)	28.1	61.0	10.9	(799)
Information about project	28.3	61.8	9.9	(898)
Speed in handling requests	38.2	46.2	14.6	(1,034)
SENIORS PROJECTS				
Maintenance of grounds	7.3	54.2	38.6	(1,267)
Repairing of unit	8.0	57.7	34.2	(1,265)
Security	11.4	58.2	30.4	(1,155)
Information (comm/social serv)	7.3	63.7	29.0	(1,056)
Information about project	9.0	65.3	25.7	(1,027)
Speed in handling requests	12.9	57.8	29.3	(1,198)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

proportion of public housing clients reported that they were satisfied with unit repairs (80 per cent) than did renters in general (71 per cent).

As was the case with other aspects of public housing, families expressed greater dissatisfaction with project management than did seniors. The disparity in levels of dissatisfaction between family and senior clients was most pronounced with respect to the provision of information concerning community and social services, the repairing of dwelling units and security. Almost one-half (41.9 per cent) of all family clients were dissatisfied with project security.

D. The Quality of Life in Public Housing Projects

In addition to the client satisfaction measures discussed above, the Survey of Public Housing Tenants provides several further indicators of the quality of life in public housing projects. Several issues have been examined in this respect, including the extent to which facilities and services are available to public housing clients (whether on site or in the nearby community), the existence of problems with crime in public housing projects and the extent to which the residents of public housing projects are integrated within the communities in which they are situated.

1. Access to Facilities and Services

The availability of key facilities and services in public housing projects and the nearby area are considered below, along with assessments of client satisfaction.

a) On-Site Facilities and Services

Recognizing the special requirements of the client group, provision was made in the program for the allocation of space in public housing projects for certain on-site facilities and services. Capital and operating costs associated with the provision of the space are eligible for cost-sharing, although the cost of running programs and providing staff are not.

Guidelines and procedures manuals governing the production phase for the Section 79 program state that the need for on-site facilities and services was to be assessed at the project development stage with reference to the availability of existing facilities in the neighbourhood or community and their ability to absorb new users, the characteristics of the tenants, and the physical characteristics of the project. Similarly, the Section 81 guidelines state that the needs of tenants were to be assessed with regard to sites, units and on-site social and recreational facilities, and draw particular attention to the importance of recognizing the "special needs of children in family housing projects". The types of on-site facilities specifically mentioned in the program manuals include meeting rooms, outdoor play areas for pre-schoolers and for school aged children and indoor play spaces (e.g. for boys and girls clubs, modest teen centres etc.) in family projects and rooms for specialized social and recreational activities (in large projects).

Respondents to the client survey were asked whether a variety of facilities and services (health care services, social support services, child day care, parks and play areas, and meeting rooms) were available in their project. The survey results indicate that the majority of residents have access to these key facilities and services on site (Table 11.9). Meeting rooms were reported to be present by 84.3 per cent of survey respondents. The presence of on-site parks or play areas were reported by 80.3 per cent of clients. Just over three-quarters (76.3 per cent) of the survey respondents indicated that health care services (i.e. clinic, nursing, doctor's or dentist's office) were available in their project.

TABLE 11.9
AVAILABILITY OF AND CLIENT SATISFACTION WITH PROJECT FACILITIES AND SERVICES

FACILITY OR SERVICE	CLIENTS REPORTING AVAILABILITY (PER CENT)	CLIENT SATISFACTION (PER CENT)			
		NOT SATISFIED	SATISFIED	VERY SATISFIED	SAMPLE SIZE (n)
ALL PROJECTS					
Health care	76.3	7.6	61.2	31.2	(1,652)
Social support	76.2	8.5	67.9	23.6	(1,233)
Child day care	46.0	14.2	67.1	18.7	(554)
Parks/Play areas	80.3	16.2	58.2	25.6	(1,351)
Meeting rooms	84.3	10.6	61.9	27.5	(1,575)
FAMILY PROJECTS					
Health care	74.5	9.8	54.9	35.3	(687)
Social support	69.6	12.2	63.7	24.1	(468)
Child day care	65.1	13.9	67.8	18.3	(394)
Parks/Play areas	89.5	21.7	50.7	27.6	(754)
Meeting rooms	68.3	18.2	65.3	16.5	(420)
SENIORS PROJECTS					
Health care	79.7	5.3	65.4	29.3	(835)
Social support	83.6	5.7	70.3	24.0	(662)
Child day care	17.0	3.8	68.2	28.0	(93)
Parks/Play areas	68.2	5.4	70.2	24.4	(446)
Meeting rooms	94.2	5.2	61.1	33.7	(1,024)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

The same proportion of clients reported the presence of on-site social support services (e.g. counselling, drop-in centre, meals-on-wheels). Two-thirds of family clients indicated that child day-care was available in their project.

Generally speaking, seniors projects appear to be better serviced than those serving families (with the exception of family-oriented services such as child day care and parks and play areas). The availability of health care services, social support services and meeting rooms was greater in seniors projects than those serving families. Almost one-third (31.7 per cent) of family respondents reported that their project did not have a meeting room for the use of tenants.

Clients were also asked to rate their degree of satisfaction with those services and facilities which they reported being provided on-site. High levels of satisfaction were reported with respect to on-site facilities and services, where they had been made available. Of the clients reporting that health services were available on site, 92.4 per cent reported that they were either satisfied or very satisfied with the service provided. Similar levels of satisfaction were reported with respect to social support services (91.5 per cent), and meeting rooms (89.4 per cent). The greatest dissatisfaction was reported over parks/play areas and child day care, with 14.2 and 16.2 per cent of clients dissatisfied, respectively.

Residents of seniors projects expressed the greatest degree of satisfaction with on-site facilities and services, with at least 94 per cent reporting that they were either satisfied or very satisfied with each of the five types of facilities and services, where provided on site. The highest incidence of client dissatisfaction with on-site facilities and services was recorded for parks and play areas (21.7 per cent) and meeting rooms (18.2 per cent) in family projects.

b) Community Facilities and Services

The accessibility and suitability of community facilities and services was to be an important consideration in the siting of public housing projects. The Section 79 program guidelines state that the location of new and existing projects was "to meet the needs of the client with necessary services available". During the project development stage for the Section 81/82 program, projects reviewed were to assess the current and anticipated character of the surrounding neighbourhood in order to determine whether it was a suitable location for the proposed project. A particularly important consideration was to be the suitability and accessibility of off-site community facilities and services. Accordingly, an assessment was to be undertaken as to whether residents had adequate and convenient access to schools, shopping, parks, play areas, open space, employment, health care, social and recreational, libraries, churches and public transportation.

In some cases, however, concerns regarding the use of prime land for subsidized housing led to public housing projects being located in isolated suburban sites, relatively far from facilities and services. Over time, problems of inaccessibility have largely been resolved, as suburban development has continued and the areas surrounding public housing projects have become mature residential neighbourhoods. The data obtained through the client survey allow for the assessment of whether accessibility problems still prevail today.

Those public housing clients who were surveyed were asked to report on the availability of a variety of facilities and services in the vicinity of the project in which they live. The responses to this question are reported in Table 11.10. Out of a list of fifteen possible facilities and services, seven were available in at least 90 per cent of all cases. Facilities and services which were available in less than 90 per cent of cases are: gardening areas (68.7 per cent),

TABLE 11.10
AVAILABILITY OF COMMUNITY FACILITIES AND SERVICES

	FACILITY OR SERVICE AVAILABLE IN NEARBY AREA					
	FAMILY PROJECTS		SENIOR PROJECTS		ALL PROJECTS	
FACILITY OR SERVICE	PER CENT	(n)	PER CENT	(n)	PER CENT	(n)
Public transit	94.6	(969)	89.3	(1,135)	91.5	(2,315)
Grocery shopping	97.3	(1,015)	98.4	(1,212)	97.7	(2,437)
Other shopping	97.9	(988)	95.2	(1,138)	96.3	(2,334)
Drug stores	96.7	(1,007)	95.8	(1,191)	96.2	(2,410)
Banks	95.9	(990)	96.0	(1,159)	96.0	(2,359)
Health care	95.6	(967)	94.2	(1,130)	94.9	(2,307)
Social support services	81.2	(671)	90.2	(824)	85.9	(1,643)
Place of worship	90.7	(838)	91.4	(1,015)	91.1	(2,007)
Social/Cultural facil.	87.7	(798)	91.6	(928)	89.7	(1,887)
Recreational facilities	89.9	(899)	73.9	(773)	82.7	(1,841)
Entertainment	84.3	(815)	84.0	(782)	83.9	(1,743)
Gardening area(s)	74.1	(816)	64.5	(787)	68.7	(1,771)
Parks/Play areas	95.7	(910)	76.6	(752)	87.5	(1,844)
Child day care	81.2	(664)	39.3	(463)	65.5	(1,246)
Schools	97.6	(855)	71.0	(496)	88.2	(1,501)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

child day care (65.5 per cent), social support services (85.9 per cent), parks or play areas (87.5 per cent), schools (88.2 per cent) and social or cultural facilities (89.7 per cent), recreational (82.7 per cent) and entertainment (83.9 per cent).

Client satisfaction with community facilities and services is generally high (Table 11.11). At least 90 per cent of clients reported that they were either satisfied or very satisfied with 10 of the 15 facilities and services listed in the survey. The highest incidence of client dissatisfaction was expressed concerning gardening areas (24.4 per cent), parks or play areas (14.8 per cent), entertainment (14.3 per cent), recreational facilities (13.2 per cent) and child day care (11.6 per cent).

As was the case with on-site facilities and services, satisfaction with community facilities and services is greatest among senior clients (Table 11.12). Over 90 per cent of seniors were satisfied with 14 of the 15 facilities and services listed in the questionnaire, the only exception being grocery shopping (where 89.1 per cent reported being either satisfied or very satisfied).

TABLE 11.11
CLIENT SATISFACTION WITH COMMUNITY FACILITIES AND SERVICES

FACILITY OR SERVICE	NOT SATISFIED	SATISFIED	VERY SATISFIED	SAMPLE SIZE (n)
Public transit	9.9	55.8	34.3	(2,116)
Grocery shopping	9.8	57.6	32.6	(2,388)
Other shopping	10.4	61.4	28.2	(2,239)
Drug stores	6.1	59.1	34.8	(2,318)
Banks	5.1	62.5	32.4	(2,291)
Health care services	6.4	61.4	32.2	(2,210)
Social support services	9.0	65.5	25.5	(1,380)
Place of worship	6.7	67.6	25.7	(1,874)
Social/Cultural facilities	9.8	67.1	23.1	(1,707)
Recreational facilities	13.2	64.5	22.3	(1,508)
Entertainment	14.3	65.4	20.3	(1,448)
Gardening area(s)	24.4	62.8	12.8	(1,179)
Parks/Play areas	14.8	65.0	20.2	(1,588)
Child day care	11.6	73.1	15.3	(809)
Schools	5.8	64.1	30.1	(1,327)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Among family clients, dissatisfaction was most pronounced with respect to opportunities for leisure activities (e.g. gardening areas, entertainment, parks and play areas and recreational facilities). Outside of these areas, the greatest dissatisfaction was expressed with social and cultural facilities, social support services and child day care.

2. Problems with Crime

One of the implicit objectives of all social housing programs is that a socially acceptable living environment is provided to residents of social housing projects. Public housing is no exception. Indeed, the statement of objectives for the Section 81/82 program explicitly recognizes this by stating the objective of providing "decent, safe and sanitary housing".

Since the inception of the program, concerns have been expressed that the concentration of social problems in large public housing projects may depreciate the quality of life experienced by public housing residents, rendering public housing projects to be undesirable and, in some instances, unsafe places to live. Recent media reports concerning crime in public housing projects have served to reinforce this perception.

TABLE 11.12
CLIENT DISSATISFACTION WITH COMMUNITY FACILITIES AND SERVICES

	PER CENT DISSATISFIED					
	FAMILY PROJECTS		SENIOR PROJECTS		ALL PROJECTS	
FACILITY OR SERVICE	PER CENT	(n)	PER CENT	(n)	PER CENT	(n)
Public transit	10.7	(886)	9.5	(1,028)	9.9	(2,116)
Grocery shopping	8.5	(996)	10.9	(1,190)	9.8	(2,388)
Other shopping	10.8	(958)	9.8	(1,087)	10.4	(2,239)
Drug stores	6.0	(969)	6.5	(1,145)	6.1	(2,318)
Banks	5.4	(962)	5.1	(1,126)	5.1	(2,291)
Health care services	8.5	(934)	4.7	(1,076)	6.4	(2,210)
Social support services	13.9	(545)	4.6	(708)	9.0	(1,380)
Place of worship	9.3	(774)	4.5	(958)	6.7	(1,874)
Social/Cultural facilities	15.5	(714)	5.3	(852)	9.8	(1,707)
Recreational facilities	15.8	(813)	8.3	(555)	13.2	(1,508)
Entertainment	18.2	(728)	9.2	(599)	14.3	(1,448)
Gardening area(s)	34.9	(586)	9.7	(479)	24.4	(1,179)
Parks/Play areas	18.1	(862)	9.2	(563)	14.8	(1,588)
Child day care	12.0	(545)	8.2	(174)	11.6	(809)
Schools	7.3	(834)	2.7	(354)	5.8	(1,327)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Previous mention has been made of the fact that almost as many residents report worse conditions (25 per cent) as improvements (31 per cent) in the area of crime and vandalism, when comparing their current housing to their prior housing. Security against crime and vandalism was also the area of project management where the greatest dissatisfaction was expressed by public housing residents (26.2 per cent dissatisfied). These problems were particularly prominent in family projects where more clients cited worse conditions than improvements, in comparing problems with crime and vandalism in their current to their prior housing, and where fully 41.9 per cent were not satisfied with project security.

Survey data confirm that crime is viewed by both residents and project managers to be a significant problem in public housing projects (Table 11.13). Property related crimes (i.e. vandalism and property theft) appear to be the most pervasive problems, each reported to be either a "major" or "minor" problem by almost one-half of all respondents. Less frequently reported were problems with drug dealing and assault -- each cited by just over one-quarter of survey respondents. It is worthy of note, however, that where

TABLE 11.13
SEVERITY OF CRIME PROBLEMS
RESIDENTS' AND PROJECT MANAGERS' ASSESSMENTS

PROBLEM	MAJOR PROBLEM	MINOR PROBLEM	NOT A PROBLEM	SAMPLE SIZE (n)
RESIDENTS' ASSESSMENT				
Vandalism	20.7	24.9	54.4	(2,225)
Property theft	15.1	27.6	57.3	(2,200)
Drug dealing	18.8	10.0	71.2	(1,714)
Assault	12.0	14.8	73.2	(1,993)
PROJECT MANAGERS' ASSESSMENT				
Vandalism	13.1	37.7	49.2	(4,211)
Property theft	7.9	34.0	58.1	(4,138)
Drug dealing	12.6	12.6	74.8	(3,755)
Assault	6.5	19.3	74.2	(3,931)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

problems with drug dealing have been reported to be problems, they are much more likely to be viewed as "major" as opposed to "minor" problems, in contrast to the other forms of crime where minor problems outnumber major problems. Altogether, one-third of public housing clients reported that one or more of these four types of crime were a major problem in their project (Table 11.14). This figure was considerably higher for family projects (57.5 per cent).

Project managers' assessments of the incidence of problems with criminal activity conform fairly closely to those provided by public housing residents. The principal distinction between client and project manager assessments is that project managers more frequently perceived the problems to be of a "minor" rather than a "major" nature than did residents. This finding is not altogether surprising, insofar as residents are both in a better position to be aware of criminal activity and are most directly affected by it. Nonetheless, given the fact that security is the area of project management where clients have expressed the greatest dissatisfaction, these data suggest that project managers may underestimate the problems associated with criminal activity in public housing projects.

The survey evidence indicates that major problems with crime are concentrated in certain components of the public housing portfolio (Table 11.14). The incidence of crime being reported as a major problem is markedly higher among residents of family projects than those residing in seniors projects (20 times as high in the case of drug dealing, 7 times as high for vandalism and for assault and 6 times as high for property theft). Crime also appears to be largely associated with

TABLE 11.14
RESIDENTS' ASSESSMENTS OF MAJOR CRIME PROBLEMS BY SELECTED PROJECT CHARACTERISTICS

PROJECT CHARACTERISTICS	PER CENT OF RESPONDENTS REPORTING THAT CRIME IS A MAJOR PROBLEM					
	THEFT	VANDALISM	DRUG DEALING	ASSAULT	ONE OR MORE TYPE(S) OF CRIME[1]	SAMPLE SIZE (n)
PROVINCE/TERRITORY						
Newfoundland	3.9	15.0	13.3	3.5	24.4	(115)
Prince Edward Island	4.1	2.7	2.5	0.5	6.8	(145)
Nova Scotia	14.2	13.6	17.8	11.6	21.3	(158)
New Brunswick	20.4	18.6	21.3	12.1	36.1	(152)
Quebec	13.8	13.5	9.6	9.3	24.4	(317)
Ontario	15.7	29.6	27.5	15.0	44.3	(434)
Manitoba	22.5	14.6	16.7	9.4	37.9	(98)
Saskatchewan	5.5	5.1	2.4	4.1	8.9	(125)
Alberta	14.4	12.9	8.8	4.5	23.8	(118)
British Columbia	16.5	26.2	21.7	10.5	47.8	(131)
Yukon	-	-	-	-	-	(13)
Northwest Territories	-	-	-	-	-	(24)
CLIENT TYPE						
Family	24.5	34.7	36.0	20.5	57.5	(820)
Senior	4.0	4.8	1.8	2.9	8.9	(846)
Family & Senior	27.4	29.3	25.4	20.0	49.1	(155)
MUNICIPALITY SIZE						
Under 2,500	7.9	4.1	2.9	11.2	17.4	(164)
2,500 - 9,999	6.7	9.7	12.7	12.9	20.4	(232)
10,000 - 29,999	7.6	6.5	4.7	4.7	15.2	(272)
30,000 - 99,999	9.7	12.7	8.5	3.2	21.1	(349)
100,000 - 499,999	20.7	36.5	29.9	17.7	53.6	(455)
500,000 or more	22.1	24.5	29.7	15.5	45.8	(358)
PROJECT SIZE (UNITS)						
Under 10	11.2	1.3	2.5	10.6	14.2	(85)
10 - 49	7.2	9.5	7.7	8.7	17.9	(545)
50 - 99	13.1	10.5	7.7	6.8	23.4	(289)
100 - 199	17.3	31.1	23.1	12.4	46.0	(546)
200 or more	24.9	32.5	40.6	20.2	57.0	(365)
PROJECT TYPE						
Detached, Semi & Row	21.0	23.4	24.6	15.5	42.6	(582)
Low rise	5.8	7.6	3.9	3.8	11.0	(393)
High rise	10.8	22.1	13.7	10.6	34.1	(574)
Mixed (no high rise)	20.7	23.7	31.1	12.2	54.4	(153)
Mixed (with high rise)	32.4	38.8	57.8	30.7	68.7	(128)
ALL	15.1	20.7	18.8	12.0	35.1	(1,830)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.
NOTE: [1] Property theft, vandalism, drug dealing or assault.

projects located in urban areas with populations of 100,000 or more. The principal exception to this trend is that of assault, which is almost as prevalent in rural areas and small towns with fewer than 10,000 people as it is in larger cities.

Among the different physical characteristics of public housing projects, the larger projects (with 100 units or more) and those consisting of a mixture of building types (typically large projects housing families or families and seniors together) record the highest incidence of major problems with crime. The incidence of respondents reporting major problems with property theft was highest in Manitoba (22.5 per cent) and New Brunswick (20.4 per cent). Major problems with vandalism are most prevalent in Ontario (29.6 per cent) and British Columbia (26.2 per cent). Public housing clients in Ontario reported the highest incidence of major problems with drug dealing (27.5 per cent) and assault (15.0 per cent).

For comparative purposes, a sample of the general population was asked to rate the seriousness of problems with crime in the area near their homes. A comparison of the aggregate perceptions of public housing residents concerning problems with crime with those of the population at large would suggest that crime problems in public housing are less prevalent than in the community at large (Table 11.15). This observation must be qualified, however, due to the high proportion of senior citizens in public housing (one-half of all households) and the different reference area to which the responses to the two surveys apply.

Respondents to the public housing survey were asked to rate the seriousness of problems with crime in their housing project. In contrast, the Focus Canada Survey polled the perceptions of the general population with respect to crime problems in the area near their home. This less precise definition may result in a larger reference area (e.g. the neighbourhood or community) being used and, consequently, a potentially higher incidence of reported crime problems.

Compared with the general population aged 60 years or older, a relatively small proportion of residents of seniors projects report that crime is a major problem in their projects. The incidence of vandalism and assault reported as a major problem by seniors in the population at large was roughly 6 and 7 times as high, respectively, as that reported by residents of seniors public housing projects. The difference between the two groups was even more pronounced in the case of property theft (9 times as high) and drug dealing (21 times as high). Part of this difference is likely due to differences in the reference area used (projects comprised solely of senior citizens versus blocks or neighbourhoods where the population is more heterogeneous). It is also likely that seniors housing projects provide a greater sense of security than senior citizens may experience in the community at large.

TABLE 11.15
RESIDENT ASSESSMENTS OF CRIME PROBLEMS PUBLIC HOUSING VS. THE GENERAL POPULATION

	INCIDENCE OF CRIME BEING REPORTED AS A MAJOR PROBLEM							
	VANDALISM		PROPERTY THEFT		ASSAULT		DRUG DEALING	
RESIDENTS	PER CENT	(n)	PER CENT	(n)	PER CENT	(n)	PER CENT	(n)
PUBLIC HOUSING								
All	20.7	(2,225)	15.1	(2,200)	12.0	(1,993)	18.8	(1,714)
Families	34.7	(971)	24.5	(932)	20.5	(853)	36.0	(738)
Seniors	4.8	(1,049)	4.0	(1,065)	2.9	(967)	1.8	(837)
COMPARISON GROUPS								
All households	28.6	(1,966)	34.3	(1,986)	19.6	(1,946)	38.0	(1,846)
All renters	35.1	(616)	40.2	(616)	28.4	(603)	49.5	(578)
Low-income[1]	36.1	(322)	39.2	(322)	25.0	(398)	49.4	(295)
Families[2]	26.5	(794)	33.3	(802)	17.5	(786)	39.1	(753)
Seniors[3]	28.3	(417)	37.8	(417)	20.6	(413)	37.5	(374)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989; data for comparison groups were obtained from the Focus Canada Survey, Environics Research Group, January 1989.

NOTE:
[1] Households with annual incomes of less than $15,000.
[2] Households with children under 18 years of age living at home.
[3] Respondent aged 60 years or more.

Major problems with vandalism in family projects are higher than those reported in the community at large and among families with children at home, but are similar to those reported among the general renter population and among low-income households. This is partially a reflection of characteristics of the built form which public housing and the private rental stock share, which provide greater "opportunities" for vandalism (i.e. multiple-unit housing forms with more public and semi-public areas such as parking garages, lobbies etc.). The incidence of problems with assault and drug dealing reported as being a major problem by residents of family public housing projects are similar to those reported by members of the community at large and by families with children at home, but are lower than those reported among renters and low-income households. The incidence of major problems with property theft are lower among public housing projects than any of the five comparison groups from the general population. Generally speaking, problems with crime do not appear to be a feature of public housing per se, but rather are reflective of the dynamics of crime prevailing in the community at large (e.g. related to low incomes, large cities, etc.).

3. Community Relations

Recognizing the potential for stigmatization and isolation of public housing residents within the broader community, the Section 81/82 program was to "...provide accommodation which most effectively integrates public housing occupants into the community". Accordingly, the integration of the project into the surrounding community was an explicit priority in the production phase for Section 81 projects. A wide range of factors were considered in this regard: compatibility of project site, size and design, incomes, required community facilities and zoning. Ways to overcome local resistance included limiting project size, avoiding a homogeneous client base, using privately developed turnkey projects, pursuing design compatibility and holding public information meetings. Projects were to be adequate in terms of size, design, specifications and facilities and be comparable to privately initiated projects in the community where the project was to be built.

A central question, but one which is difficult to measure empirically, concerns the degree to which public housing residents have been successfully integrated into their surrounding communities. Several indicators of community integration are available from the Survey of Public Housing Project Managers. Respondents to this survey provided their assessment of the extent of social interaction between residents of the project and the surrounding community. The results are tabulated in Table 11.16.

The project managers indicated that in the majority of the portfolio, project residents were somewhat closely involved in the nearby community (63.5 per cent) and that community members met and visited fairly freely and regularly with project residents. In only one-fifth of the portfolio did project managers feel that residents were not in any way closely involved in the community. In one-quarter of the portfolio project managers reported that community members did not visit freely or regularly with project residents.

In only a very few cases did project managers indicate that there was clear evidence of severe isolation of residents from the community, whether reflected in community services not being regularly available to project residents (3.3 per cent), significant social barriers existing between residents and community members (9.1 per cent), project residents having severe difficulty in using community and social services (4.5 per cent), projects not requiring interaction with the community due to their relative self sufficiency (3.4 per cent) or projects being physically isolated from other residential communities (1.8 per cent).

TABLE 11.16
RELATIONSHIPS BETWEEN PROJECT RESIDENTS AND THE NEARBY COMMUNITY PROJECT MANAGERS' ASSESSMENTS

	PROJECT MANAGERS' ASSESSMENTS (PER CENT)			
INDICATOR OF PROJECT/ COMMUNITY RELATIONS	**DOES NOT DESCRIBE**	**DESCRIBES SOMEWHAT**	**DESCRIBES EXACTLY**	**SAMPLE SIZE (n)**
The residents of this project are closely involved with the nearby community and its schools, clubs and services.	18.9	63.5	17.6	(3,752)
Members of the nearby community meet and visit freely and regularly with residents of this project.	25.9	53.0	21.1	(3,716)
Community and social services are regularly available to residents within this project.	3.3	50.6	46.1	(4,079)
There are significant social barriers between the residents of this project and the nearby community.	58.9	32.0	9.1	(3,833)
Residents of this project have severe difficulty in using community and social services which are provided outside this project.	78.6	16.9	4.5	(3,851)
This project is a "community" in itself which needs and uses few services from outside its own boundaries.	77.0	19.5	3.4	(4,101)
This project is located in an area far removed from any other residential community.	94.5	3.7	1.8	(4,212)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: Project managers' responses are weighted by project size (number of units).

Four indicators of poor project-community relations have been selected for further analysis (Table 11.17). In most cases, lack of integration was most evident in family projects, larger projects, projects with a mixture of building types and projects located in larger cities.

The incidence of project residents not being involved in the community was highest in projects housing families and seniors together (36.3 per cent), projects with a mixture of building types -- particularly those without a high-rise component (40.2 per cent) and projects with more than 10 units. The incidence of community members not meeting or visiting regularly and freely with project residents was highest among family and family/senior projects, projects with a mixture of building types, projects with 50 or more units, and projects located in municipalities with populations of 10,000 or more. Indications of social barriers between project residents and the nearby community were most prevalent among family and family/senior projects, projects with a mixture of building types, projects with 200 units or more and projects located in urban centres with populations of 100,000 or more. Severe difficulties in using community facilities and services were reported by very few project managers. The only component of the portfolio which stands out in this respect are mixed projects with a high-rise component.

E. Public Housing: Permanent Housing or Transitory Assistance

Another evaluation issue to be examined is related to the original rationale for the Public Housing Program. When the Public Housing Program was established, one of the implicit objectives was that the program would provide transitory housing assistance to households who would eventually move back to the private market when their incomes increased. At issue is whether this objective is still relevant in view of the often more longer term nature of low-income households' requirements for assistance.

To address this issue, clients surveyed were requested to report the year in which they moved into public housing, into the project where they currently reside and into the specific unit which they occupied at the time of the survey. Based on their responses, the length of occupancy has been calculated and is presented in Table 11.18. For the majority of client households, public housing is serving as a source of medium-to-long-term accommodation. While just under one-fifth of the survey respondents (18.1 per cent) had been in public housing for under two years, well over one-half (60.3 per cent) reported that they have lived in public housing for at least five years. Just over one-quarter (26.2 per cent) reported that they have lived in public housing for 10 years or more.

TABLE 11.17
RELATIONSHIPS BETWEEN PROJECT RESIDENTS AND THE NEARBY COMMUNITY PROJECT MANAGERS' ASSESSMENTS

PROJECT CHARACTERISTICS	PROJECT RESIDENTS NOT CLOSELY INVOLVED IN COMMUNITY		RESIDENTS OF NEARBY COMMUNITY DO NOT REGULARLY MEET/VISIT WITH PROJECT RESIDENTS		SIGNIFICANT SOCIAL BARRIERS EXIST BETWEEN PROJECT RESIDENTS & NEARBY COMMUNITY		RESIDENTS HAVE SEVERE DIFFICULTY USING OFF-SITE SERVC.	
	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)
CLIENT								
Family	21.6	(1,689)	37.9	(1,639)	15.9	(1,737)	5.7	(1,740)
Senior	15.2	(1,917)	15.8	(1,939)	3.7	(1,947)	3.5	(1,971)
Family & Senior	36.3	(138)	40.3	(130)	11.1	(142)	5.9	(132)
PROJECT TYPE								
Detached, Semi & Row	11.8	(1,741)	19.6	(1,734)	11.2	(1,764)	1.6	(1,800)
Low rise	22.1	(1,270)	18.5	(1,264)	3.7	(1,295)	3.7	(1,309)
High rise	18.2	(416)	24.7	(400)	6.5	(427)	4.8	(418)
Mixed (no high rise)	40.2	(73)	55.5	(79)	23.6	(81)	4.0	(78)
Mixed (with high rise)	28.3	(39)	51.8	(36)	21.6	(44)	18.9	(38)
PROJECT SIZE								
Under 10 units	7.5	(728)	5.8	(728)	2.9	(712)	1.3	(742)
10-49 units	15.7	(2,156)	13.4	(2,161)	5.3	(2,232)	2.6	(2,256)
50-99 units	25.1	(427)	29.6	(409)	7.3	(434)	2.1	(421)
100-199 units	20.2	(289)	31.4	(269)	7.7	(301)	3.8	(281)
200 units or more	18.4	(133)	34.1	(132)	15.8	(139)	8.6	(137)
MUNICIPALITY SIZE								
Under 2,500	12.4	(1,099)	5.4	(1,120)	4.6	(1,062)	3.4	(1,069)
2,500-9,999	17.0	(876)	9.5	(879)	4.7	(921)	1.8	(943)
10,000-29,999	21.6	(506)	21.3	(532)	6.3	(546)	4.7	(528)
30,000-99,999	20.1	(452)	22.0	(444)	6.6	(457)	1.3	(483)
100,000-499,999	17.7	(374)	37.9	(354)	10.6	(418)	5.9	(413)
500,000 or more	21.9	(445)	32.3	(387)	13.5	(429)	6.2	(417)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: Project managers' responses are weighted by project size (number of units).

TABLE 11.18
LENGTH OF OCCUPANCY OF PUBLIC HOUSING RESIDENTS

LENGTH OF OCCUPANCY (YEARS)	PUBLIC HOUSING	SAME HOUSING PROJECT	SAME UNIT
Under 2	18.1	21.4	22.3
2 - 5	21.6	24.4	25.9
5 - 10	34.1	32.1	29.6
10 - 15	15.4	15.1	16.1
15 - 20	8.4	5.0	4.6
20 or more	2.4	2.0	1.5
ALL	100.0	100.0	100.0
Sample Size (n)	(1,993)	(1,768)	(2,232)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Long-term occupancy (10 years or more) appears to be most prevalent in New Brunswick and Nova Scotia (Table 11.19). In contrast, short-term occupancy (less than five years) is most prevalent among clients in Alberta, Saskatchewan and Prince Edward Island. Short-term occupancy is only marginally more prevalent among family households than seniors.

Public housing residents completing the survey were also asked whether they plan to move out of public housing at some time in the future and, if so, when this move would likely take place. The responses to this question are reported in Table 11.20. The data indicate that only 3.5 per cent of public housing residents expressed an intention to move within one year. Indeed only 17.7 per cent of public housing residents expressed any plans to move at all (over any period). By comparison, a recent survey of the renter population in general reported that 36 per cent of respondents indicated that they planned to move within the coming year (Focus Canada Survey, Environics Research Group, January 1989). Whether reflected in duration of occupancy data or expressed moving intentions, the public housing portfolio is clearly regarded by clients as a source of medium-to-long-term accommodation and is being used as such.

TABLE 11.19
LENGTH OF OCCUPANCY

	PER CENT OF CLIENT HOUSEHOLDS BY YEARS RESIDING IN PUBLIC HOUSING			
	UNDER 5 YEARS	5 - 9 YEARS	10 OR MORE YEARS	SAMPLE SIZE (n)
PROVINCE/TERRITORY				
Newfoundland	40.8	29.0	30.2	(121)
Prince Edward Island	55.4	28.9	15.7	(137)
Nova Scotia	33.0	32.3	34.7	(148)
New Brunswick	44.2	19.7	36.1	(166)
Quebec	31.5	41.0	27.5	(245)
Ontario	34.1	36.2	29.7	(505)
Manitoba	49.1	27.1	23.8	(107)
Saskatchewan	54.9	29.0	16.1	(158)
Alberta	62.1	29.6	8.3	(154)
British Columbia	42.9	30.8	26.3	(147)
Yukon	-	-	-	(21)
Northwest Territories	-	-	-	(24)
CLIENT TYPE				
Family	44.9	28.7	26.4	(858)
Senior	34.6	39.7	25.7	(919)
Family & Senior	39.3	34.7	26.0	(149)
ALL	39.7	34.1	26.2	(1,933)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and Northwest Territories.

Table 11.21 presents more disaggregated data on moving intentions of public housing clients, by client group and province and territory. Expressed moving intentions are highest in Alberta, British Columbia, Newfoundland and Manitoba. Moving intentions expressed by residents of family projects were 8 times as high as those recorded among senior citizen clients.

TABLE 11.20
MOVING PLANS

MOVING PLANS	PER CENT	PER CENT OF MOVERS
Do not plan to move	82.3	
Plan to move	17.7	
Don't know when	-	47.2
Under 1 year	-	20.0
1 - 2 years	-	12.7
2 - 5 years	-	14.5
Over 5 years	-	5.6
ALL	100.0	100.0
Sample Size (n)	(2,463)	(436)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

TABLE 11.21
PER CENT OF CLIENT HOUSEHOLDS REPORTING THE INTENTION TO MOVE OUT OF PUBLIC HOUSING BY CLIENT GROUP AND PROVINCE/TERRITORY

	PER CENT	SAMPLE SIZE (n)
PROVINCE/TERRITORY		
Newfoundland	25.7	(142)
Prince Edward Island	10.7	(189)
Nova Scotia	13.2	(194)
New Brunswick	17.5	(207)
Quebec	9.5	(414)
Ontario	16.8	(620)
Manitoba	25.0	(136)
Saskatchewan	14.8	(177)
Alberta	28.2	(164)
British Columbia	25.7	(177)
Yukon	-	(21)
Northwest Territories	-	(22)
CLIENT TYPE		
Family	31.6	(1,020)
Senior	3.9	(1,231)
Family & Senior	29.8	(205)
ALL	17.7	(2,463)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Insufficient cases for analysis in the Yukon and Northwest Territories.

F. Summary

This section of the evaluation has addressed a broad range of issues pertaining to the social environment, including an examination of the prior housing conditions of public housing clients, their reasons for moving to public housing, whether the housing provided under the program has improved their living conditions, levels of client satisfaction with their living environment, the extent to which satisfactory services and facilities are available to clients (whether on-site or in the area nearby), the incidence of problems with crime, the relationships between project residents and the surrounding community and the extent to which public housing is used by clients as a source of long-term as opposed to transitory shelter.

Most public housing residents were previously housed in either the private rental market (45.0 per cent) or the private ownership market (23.3 per cent). Approximately one-fifth moved to their current unit from a different project, or another unit in the same project. High rental costs was the most commonly reported reason for moving to public housing, cited by 57 per cent of respondents. Inadequate dwelling size was the second most frequent reason given (44.4 per cent). Other frequently cited reasons were the poor state of repair of their dwelling (35.4 per cent) and the need to establish their own household (33.9 per cent). Having applied for a public housing unit, the majority of clients were allocated a unit within six months (61.3 per cent). Fully 78 per cent of respondents reported that they obtained a unit within one year of application.

In comparing their current housing unit to the one they occupied previously, respondents cited improvements in rental costs (67.1 per cent), dwelling size (64.3 per cent), state of repair (56.6 per cent) and privacy/independence (53.0 per cent). These are areas which most closely conform to formal program objectives (affordable, suitable and adequate housing). The Public Housing Program has been less successful in generating improvements in terms of providing safe environments. When comparing their current dwelling to the one they occupied previously, almost one-quarter of survey respondents reported worse conditions with respect to crime and vandalism, only slightly less than the proportion citing improvements (30.9 per cent).

Most clients are satisfied with their dwelling unit and nearby area overall. Only 12.6 per cent of respondents expressed overall dissatisfaction with their home, compared to 23.2 per cent cited by a survey of renter households in general. While clients are generally satisfied with their homes overall, higher levels of dissatisfaction were cited with respect to specific aspects of their home or broader living environment. The greatest dissatisfaction was expressed over the way projects are run (19.4 per cent). When individual aspects of project management are examined, security emerges as a major concern (with 26.2 per cent of clients expressing dissatisfaction with project management in this area). Clients also expressed a similar degree of dissatisfaction with the speed with which their requests were responded to by project staff.

The majority of public housing residents have access to key facilities and services (health care services, social support services, child day care, parks and play areas, and meeting rooms) on-site. Generally speaking, seniors projects appear to be better serviced than those serving families (with the exception of family-oriented services such as child day care and parks and play areas). High levels of satisfaction were reported with respect to on-site facilities and services, where they had been made available. The highest incidence of client dissatisfaction was recorded for parks and play areas (21.7 per cent) and meeting rooms (18.2 per cent) in family projects.

Most important facilities and services are accessible to public housing clients within the nearby community. Out of a list of fifteen possible facilities and services, seven were available in at least 90 per cent of all cases. Client satisfaction with community facilities and services is generally high. As was the case with on-site facilities and services, satisfaction with community facilities and services is greater among senior citizens than family clients.

The emergence of security as a major concern of tenants is a reflection of their concern with crime in public housing projects. Almost half of all respondents reported that vandalism and property theft were problems in their project and just over one-quarter reported problems with drug dealing and assault. Altogether, one-third of all clients and over one-half of family clients reported that one or more of these four types of crime were a major problem in their project. The survey evidence indicates that major problems with crime are principally concentrated in family projects and projects located in urban areas with populations of 100,000 or more.

Generally speaking, problems with crime do not appear to be a feature of public housing per se, but rather are reflective of the dynamics of crime prevailing in the community at large (e.g. related to low incomes, large cities, etc.). The incidence of major problems with vandalism in family housing projects (as revealed in residents' perceptions) were generally similar to those recorded by renters and low-income households in general with respect to their areas of residence. However, the incidence of major problems with property theft, assault and drug dealing reported by family clients were generally lower than those recorded among renters and low-income households. Major problems with crime in senior citizen projects were much lower than those reported by senior citizens in the population at large.

Project managers noted that, in the majority of cases, project residents were involved in the nearby community and that members of the nearby community met and visited fairly regularly with project residents. In only very few cases did project managers indicate that there was clear evidence of severe isolation of residents from the community.

For the majority of client households, public housing is serving as a source of medium-to-long-term accommodation. Well over one-half (60.3 per cent) of respondents reported that they have lived in public housing for at least five years. Just over one-quarter (26.2 per cent) reported that they have lived in public housing for 10 years or more. Expressed moving intentions underscore the extent to which public housing is viewed by clients to be a medium-to-long-term source of accommodation. Few respondents expressed the intention of moving (17.7 per cent). Fewer still could say when they intend to move (8.3 per cent). Only 3.5 per cent of respondents reported that they intend to move out of public housing within one year, compared with a proportion of 36 per cent recorded among the general renter population.

XII COMMUNITY IMPACTS ON THE UTILIZATION OF PUBLIC HOUSING

Previous chapters of this report have dealt with the condition and the need for modification of the public housing stock. This section deals with community impacts on the utilization of the portfolio.

Project utilization can diminish as a result of two principal changes in the characteristics of a community. First, there can be a reduction of need for public housing, or second, a neighbourhood can become less attractive for residential purposes. Rural areas are most vulnerable to community changes, since these communities are more likely to depend on one source of employment, and have a small population base. Declining resource towns or agricultural areas are examples of these communities. Rural public housing projects do not permit flexible solutions to problems of low need, since housing built for a limited need in one rural area cannot be easily transplanted to accommodate a growing, but still limited need in another rural area. The likely result is underutilization of the stock with the possibility of abandonment. In urban areas, a major change in the local economy and/or population base, as was the case in Calgary when domestic oil markets collapsed, could result in lower need as other housing options become affordable.

In urban areas a larger, more diverse population base usually ensures that there are sufficient clients for public housing in the long term. Although need for units may exist, the demand for certain units may not. Tenants may perceive some locations as being inappropriate for housing because of poor local conditions such as high traffic volume, dangerous and/or abandoned buildings, industrial and noise pollution and high crime rates.

This chapter reviews long-term vacancy rates as an indicator of the underutilization of public housing. Factors influencing vacancy rates such as low need and physically unsafe or hazardous conditions in the project or nearby area are examined.

A. Findings

Data obtained from the Survey of Public Housing Project Managers indicates that just over 6 per cent of units in the public housing stock were vacant for at least one month in the year preceding the survey. This was the definition used in the evaluation to define a "long-term vacancy rate". The managers of projects with long-term vacancies were asked to identify the factors contributing to vacancies in these projects. Their responses are presented in Table 12.1.

In almost one-third of all projects with long-term vacancies, project managers indicated that there was low need for public housing units (that is, few needy households nearby on waiting lists or in the community). The physical condition or maintenance of units and projects and the sizes and types of units available were also important factors identified by project managers as contributing to long-term vacancies. These two conditions were identified as contributing factors in 24.8 and 21.5 per cent, respectively, of all projects where vacancies of longer than one month in duration were recorded. Other factors cited by project managers as contributing to long-term vacancies included lack of facilities or services (e.g. shopping, recreation, health care) (9.9 per cent of projects), tenants unable to occupy their unit immediately (i.e. required to give advance notice of their moving intentions to their landlord) (9.4 per cent of projects), high rental costs (5.3 per cent of projects) and crime and vandalism (3.9 per cent of projects).

TABLE 12.1
FACTORS CONTRIBUTING TO LONG-TERM VACANCIES

CONTRIBUTING FACTOR	PER CENT OF PROJECTS WITH VACANCIES OF LONGER THAN ONE MONTH
Few needy households nearby	32.4
Physical condition/maintenance of unit/project	24.8
Unit size or type	21.5
Lack of facilities or services	9.9
Tenant not ready to occupy	9.4
Rental costs too high	5.3
Level of crime or vandalism	3.9

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: Vacancies refer to units vacant during the 12 months preceding the survey.

Table 12.2 presents more detailed data on vacancy rates and the extent to which low need was identified as a factor by project managers. Vacancy rates are high in settlements with smaller populations, with rural areas having vacancy rates almost double the mean for all projects. Vacancy rates are also higher in projects consisting of detached, semi-detached and row housing and in newer projects, both of which are prevalent in smaller towns and rural areas. In the western provinces, where more of the stock is rural, vacancy rates were more than double the mean for all projects.

TABLE 12.2
VACANCY RATES BY PROJECT CHARACTERISTICS

PROJECT CHARACTERISTICS	UNITS VACANT FOR ONE MONTH OR LONGER		PROJECTS WHERE LOW NEED IS A FACTOR CONTRIBUTING TO LONG-TERM VACANCIES	
	PER CENT	NUMBER	PER CENT OF PROJECTS WITH VACANCIES	NUMBER OF VACANT UNITS
PROGRAM				
Section 79	8.2	3,383	39.1	1,357
Section 81/82	6.1	10,031	30.2	2,538
PROVINCE/TERRITORY				
Newfoundland	5.9	278	30.3	177
Prince Edward Island	6.5	62	57.5	35
Nova Scotia	5.7	586	42.6	296
New Brunswick	9.2	358	25.4	46
Quebec	10.8	3,848	16.8	954
Ontario	2.2	2,125	26.7	317
Manitoba	13.1	1,678	35.0	503
Saskatchewan	13.2	1,631	49.6	886
Alberta	13.0	2,197	43.1	455
British Columbia	13.4	1,069	30.0	247
Yukon	4.7	12	35.3	7
Northwest Territories	4.7	157	17.7	30
CLIENT				
Family	6.8	6,094	26.3	1,615
Senior	6.1	6,177	39.2	1,940
Family & Senior	8.9	1,168	17.5	293
PROJECT AGE				
Pre-1964	2.8	247	9.2	-
1964-1969	3.6	978	10.5	118
1970-1974	6.1	4,720	26.6	1,001
1975-1979	8.3	5,384	37.1	2,019
1980-1987	7.4	2,032	39.4	693
BUILDING TYPE				
Detached, Semi & Row	8.8	4,045	34.1	1,266
Low rise	7.9	3,632	39.3	1,431
High rise	4.4	3,304	13.3	522
Mixed (no high rise)	9.6	995	18.7	289
Mixed (with high rise)	3.2	515	5.2	41
PROJECT SIZE (UNITS)				
Less than 10	10.5	545	36.3	220
10 - 49	8.5	4,915	40.2	2,035
50 - 99	7.8	2,916	21.5	566
100 - 199	8.1	3,958	9.3	847
200 or more	1.9	1,072	7.1	51
SETTLEMENT SIZE				
Rural	11.9	2,150	46.7	1,036
2,500 - 9,999	8.8	1,951	40.6	977
10,000 - 29,999	5.9	1,216	28.2	347
30,000 - 99,999	7.8	2,446	17.3	511
100,000 - 499,999	4.1	2,415	2.5	123
500,000 or more	6.0	3,275	27.9	658
ALL	6.5	13,370	32.4	3,851

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: Vacancy is calculated by the number of units vacant for at least one month (not total vacant unit months) during the 12 months preceding the survey and it is therefore a measure of the minimum vacancy rate.

As was mentioned earlier, in 32.4 per cent of public housing projects with vacancies of longer than one month in duration, low need for public housing was identified by the project managers as an important reason for these vacancies. Low need becomes an increasingly important factor as settlement size decreases. In rural areas, in particular, low need is reported to be an important reason leading to vacancies of longer than one month in almost one-half of all projects. Low need is also cited as an important factor in smaller projects and projects built since 1975. A large portion of the rural stock was built over this time frame. Either the need for these new projects has changed quickly or the original need was inaccurately assessed. Low need was more frequently identified as a factor contributing to projects with long-term vacancies in Prince Edward Island (57.5 per cent), Saskatchewan (49.6 per cent), Alberta (43.1 per cent) and Nova Scotia (42.6 per cent).

Table 12.3 provides information on the presence of community conditions which can influence vacancy rates, and further provides a mean vacancy rate for those projects where such conditions exist. Vacancy rates are particularly high where community facilities and services are unsatisfactory or where derelict or other dangerous buildings are found nearby in the

TABLE 12.3
COMMUNITY CONDITIONS WITH A POTENTIAL INFLUENCE ON VACANCY RATES

COMMUNITY CONDITIONS	NUMBER OF PROJECTS	PER CENT OF PROJECTS	MEAN VACANCY RATE
Unsatisfactory facilities and services	423	8.8	10.0
High traffic volume on residential streets	749	15.6	5.3
Major highways near project	158	3.3	5.9
Railway crossings/tracks/yards	154	3.2	6.7
Dangerous terrain near project	115	2.4	5.1
Derelict or dangerous buildings	34	0.7	11.3
Industrial pollution near project	86	1.8	7.1
VACANCY RATE: ALL PROJECTS			6.5

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.
NOTE: Vacancy rates pertain to units vacant for one month or more during the 12 months preceding the survey.

community. Where community facilities and services are lacking, the vacancy rate is 10.0 per cent (50 per cent greater than the mean for all projects). The vacancy rate for projects where derelict or dangerous buildings are found is higher still (11.3 per cent).

Other factors such as high traffic volume, railway crossings/tracks/yards, dangerous terrain and industrial pollution do not appear to have an influence on vacancy rates.

B. Summary

This chapter shows that a portion of the public housing stock is underutilized. Over 6 per cent of units were vacant for one month or longer during the year preceding the survey. Low need for public housing units was identified as a contributing factor in one-third of all projects with long-term vacancies. The physical condition or maintenance of units and projects and the sizes and types of units available were also important factors identified by project managers as contributing to long-term vacancies.

The incidence of long-term vacancies is highest in rural areas and the underutilization of this stock is predominantly characterized by low need for public housing units. Over 45 per cent of rural project managers responsible for projects with units vacant for longer than one month believed that their vacancy problem is linked to low need.

Vacancy rates are higher than average where services and facilities are assessed to be unsatisfactory (10.0 per cent) and where derelict or dangerous buildings are found in close proximity to public housing projects (11.3 per cent).

XIII MANAGEMENT PERFORMANCE: PROJECT LEVEL

The chapter begins the analysis of management performance in the public housing stock through an examination of management practices at the project level. The following chapter will examine management performance from the perspective of the support provided by the provinces and territories to the local housing authorities and individual project management teams. Chapters XIII and XIV represent the response to the evaluation issue concerning management performance.

The first section in this chapter examines the level of staffing resources available at the project level for management of the stock. The analysis looks at the number of units and projects per project manager, the existence of on-site offices and problems with travel time for project managers, the number of staff hours per 100 units, and finally, the levels of experience and accreditation of project managers.

The second section examines the management of the physical condition of the stock at the project level. The analysis looks at the incidence of postponement of maintenance and Modernization and Improvement (M&I) activities as well as the reasons for such postponements. The means of setting priorities for maintenance and M&I activities are also examined, and finally, the ratings of physical condition by the project managers are examined in comparison to the ratings provided by the CMHC inspectors.

The third section examines the management of unit preparation time. The final section looks at the level of attitudes of project managers toward tenant involvement, tenant satisfaction with their involvement in public housing and finally, the extent of tenant involvement in management.

A. Levels of Staffing Resources at the Project Level

1. Project Managers: Projects and Units Managed

Public housing projects are usually managed by a project manager. This individual may be an employee of a local housing authority or may work directly for the province; may be a part-time, full-time or a contract employee; may work on-site, in the area or in a centralized provincial office; and, may manage public housing exclusively or may manage other social housing as well. The differences in project managers evolve from the differences in the nature of the public housing stock across the country, from different management styles, and finally, from varying management structures.

Table 13.1 presents estimates of the size of the public and social housing portfolio, in terms of units and projects, managed by each project manager. The majority of project managers manage small portfolios, with more than 65 per cent of managers responsible for portfolios of less than 100 units. One-quarter of project managers have portfolios of between 100 and 499 public and social housing units. Finally, just under 10 per cent of all project managers are responsible for 500 or more units.

Table 13.1 also estimates the percentage of the total public housing stock managed by managers with different sizes of portfolio. It shows that less than one-quarter of project managers, who have large portfolios of public and social housing units, manage more than three-quarters of all public housing units.

TABLE 13.1
ESTIMATES OF SIZE OF PUBLIC AND SOCIAL HOUSING PORTFOLIO PER PROJECT MANAGER
(PROJECT SAMPLE SIZE: n=4162, N=4614)

NUMBER OF UNITS (PUBLIC AND SOCIAL HOUSING)	% OF PROJECT MANAGERS	% OF TOTAL PUBLIC HOUSING UNITS
Less than 10	9.6	0.6
10 - 49	41.3	6.7
50 - 99	14.3	5.0
100 - 199	11.6	9.4
200 - 499	13.7	27.3
500 - 999	7.6	32.5
1,000 or more	1.9	18.5
TOTAL	100.0	100.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Table 13.2 presents estimates of the average number of units and projects for both public housing and other social housing managed by project managers. The average number of units managed is greater in large urban centers where projects are larger and where LHAs manage a larger number of units and projects.

At the same time, project managers for family and older projects, which had a high incidence of poor physical conditions, also have larger unit portfolios to manage.

TABLE 13.2
ESTIMATES OF THE NUMBER OF PROJECTS AND UNITS MANAGED BY PROJECT MANAGERS
(INCLUDES PUBLIC HOUSING AND OTHER SOCIAL HOUSING)

PROJECT CHARACTERISTICS	AVE # UNITS PER PROJECT MANAGER	AVE # PROJECTS PER PROJECT MANAGER
PROGRAM		
Section 79	120.8	4.5
Section 81/82	178.9	3.8
PROVINCE/TERRITORY		
Newfoundland	314.3	10.1
Prince Edward Island	83.9	8.6
Nova Scotia	245.4	10.8
New Brunswick	162.9	4.9
Quebec	120.2	2.7
Ontario	484.0	6.7
Manitoba	108.1	3.1
Saskatchewan	58.5	2.7
Alberta	58.5	1.9
British Columbia	278.5	3.8
Yukon	42.6	7.0
Northwest Territories	95.4	5.7
CLIENT		
Family	229.4	6.1
Senior	122.0	3.1
Family & Senior	183.9	3.9
PROJECT AGE		
Pre-1964	564.1	7.7
1964-1969	501.8	6.1
1970-1974	235.1	4.9
1975-1979	129.3	3.7
1980-1987	91.9	3.3
BUILDING TYPE		
Detached, Semi & Row	124.5	4.7
Low rise	112.9	3.5
High rise	340.6	3.1
Mixed (no high rise)	204.7	3.5
Mixed(with high rise)	920.0	6.7
PROJECT SIZE (UNITS)		
Less than 10	81.0	4.1
10 - 49	114.4	4.1
50 - 99	276.6	4.7
100 - 199	342.2	3.6
200 or more	522.5	2.4
SETTLEMENT SIZE		
Rural	49.8	2.7
2,500 - 9,999	98.0	4.4
10,000 - 29,000	191.2	6.5
30,000 - 99,999	392.7	7.4
100,000 - 499,999	552.6	5.2
500,000 or more	329.4	3.4
ALL	162.3	4.0
Sample Size (n)	(4,162)	(4,027)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: With the exception of data presented at the national or provincial level, managers may manage projects in more than one category of the characteristics examined. For example, an individual manager may manage projects of different age groups. Therefore, the data presented in this table reflects the average number of all units and projects for managers who manage at least one project in the category listed.

2. On-Site Office and Travel Time

One hypothesis is that the existence of on-site offices presents advantages related to the accessibility of project staff to tenants. This accessibility would improve the frequency of maintenance and repair visits to the units and contribute to a more positive relationship between staff and tenants. However, aggregate analysis at the national level failed to identify any relationship between the existence of on-site offices and tenant satisfaction.

Many factors will influence whether a project has on-site offices or not, such as the size and building type of individual projects, the size of the community, and whether the province or territory has a centralized or decentralized management structure.

Table 13.3 presents the incidence of projects with on-site offices. Overall, the incidence of projects with on-site offices is low at just under 20 per cent. The incidence of on-site offices in public housing projects varies greatly across the country. The percentage of projects with on-site offices is lowest in the Atlantic provinces where a centralized management structure is in effect in three provinces for part or all of the public housing stock. On the other hand, more than half of the projects in British Columbia, the Yukon and the Northwest Territories have on-site offices.[1]

As could be expected, the incidence of on-site offices increases for larger projects and for more complex building types associated with larger projects. On-site offices are also more common in larger urban centres with population of 100,000 or above where larger projects are usually located.

While the incidence of on-site offices is similar for family and senior clients, it increases for more recent projects. It is difficult to know whether this increase over time can be attributed to a recognition of benefits from on-site offices or to the nature of the newer stock. In any case, the incidence of projects with on-site offices remains below 25 per cent even for the most recent projects.

The need to travel to and from public housing projects may constitute a problem in the work of the project manager. Many factors such as the number of projects managed, their geographical distribution, the level of responsibilities of

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[1] Offices located within communities of less than 2,500 are considered as being on-site offices, which may explain the large percentage of projects with on-site offices in the two territories.

TABLE 13.3
PROJECTS WITH AN ON-SITE OFFICE AND WHERE TRAVEL TIME WAS INDICATED AS A DIFFICULTY

PROJECT CHARACTERISTICS	ON-SITE OFFICE %	SAMPLE SIZE (n)	TRAVEL TIME A DIFFICULTY %	SAMPLE SIZE (n)
PROGRAM				
Section 79	15.2	(1,299)	9.9	(1,294)
Section 81/82	21.8	(2,999)	27.4	(2,951)
PROVINCE/TERRITORY				
Newfoundland	1.8	(161)	19.2	(159)
P.E.I.	0.0	(89)	27.3	(88)
Nova Scotia	7.6	(465)	13.8	(465)
New Brunswick	3.2	(124)	25.1	(125)
Quebec	21.1	(569)	38.6	(535)
Ontario	12.5	(1,242)	43.7	(1,237)
Manitoba	27.4	(301)	0.7	(294)
Saskatchewan	10.3	(523)	2.9	(521)
Alberta	29.0	(485)	2.3	(484)
British Columbia	56.6	(90)	19.6	(90)
Yukon	52.5	(12)	0.0	(13)
N.W.T.	63.3	(237)	6.9	(234)
CLIENT				
Family	18.6	(2,010)	19.6	(1,997)
Senior	20.4	(2,108)	24.7	(2,068)
Family & Senior	25.2	(172)	22.5	(172)
PROJECT AGE				
Pre-1964	14.0	(77)	25.5	(77)
1964-1969	14.2	(343)	30.5	(341)
1970-1974	15.7	(1,192)	27.1	(1,186)
1975-1979	21.1	(1,615)	23.5	(1,586)
1980-1987	24.3	(1,071)	11.7	(1,055)
BUILDING TYPE				
Detached, Semi & Row	15.0	(2,005)	16.0	(1,992)
Low rise	18.0	(1,432)	31.3	(1,399)
High rise	42.1	(468)	23.4	(462)
Mixed (no high rise)	35.6	(102)	19.6	(102)
Mixed(with high rise)	34.5	(51)	39.0	(51)
PROJECT SIZE (UNITS)				
Less than 10	18.4	(811)	14.2	(806)
10 - 49	13.8	(2,489)	24.6	(2,452)
50 - 99	25.3	(501)	24.1	(495)
100 - 199	36.0	(330)	25.3	(326)
200 or more	68.5	(148)	13.2	(147)
SETTLEMENT SIZE				
Rural	24.6	(1,193)	16.7	(1,170)
2,500 - 9,999	13.8	(998)	26.6	(986)
10,000 - 29,000	11.9	(593)	30.9	(584)
30,000 - 99,999	10.1	(528)	22.7	(526)
100,000 - 499,999	26.3	(451)	16.6	(447)
500,000 or more	31.8	(535)	21.2	(532)
ALL	19.8	(4,298)	22.1	(4,245)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: Offices located within communities of less than 2,500 are considered as being on-site offices.

the individual managers and the management structure may influence whether travel time constitutes a problem for project managers.

Table 13.3 identifies where project managers feel that travel time presents a difficulty. Overall, travel time is identified as a problem for just over 20 per cent of public housing projects. Interestingly, problems with travel time appear to be concentrated in Eastern Canada while, with the exception of British Columbia, travel time does not constitute a major problem in the territories and provinces west of Ontario.

More detailed analysis is presented in Table 13.4 which presents the relationship between difficulties with travel time and the number of projects under the responsibility of individual project managers. Table 13.4 clearly indicates that managers experience more problems with travel time as the size of their project portfolio increases. Close to 30 per cent of managers with more than five projects experience travel difficulties. In absolute terms however, travel time does not represent a major problem with under 11 per cent of all project managers responsible for just over 20 per cent of the stock reporting difficulties with travel time.

TABLE 13.4
ESTIMATES OF PROBLEMS WITH TRAVEL TIME
BY SIZE OF MANAGERS' PROJECT PORTFOLIO
(PROJECT SAMPLE SIZE: n=3974, N=4330)

NUMBER OF PROJECTS PER MGR	TRAVEL A PROBLEM # OF MGRS	%	NOT A PROBLEM # OF MGRS	%	TOTAL # OF MGRS	%
1 - 2	40	5.5	691	94.5	731	100.0
3 - 5	20	9.3	194	90.7	214	100.0
6 - 10	28	21.3	103	77.6	131	100.0
11 - 15	17	35.1	31	64.9	48	100.0
16 - 25	15	41.0	21	59.0	36	100.0
26 or more	7	31.6	14	68.4	21	100.0
ALL	127	10.7	1,055	89.3	1,182	100.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

3. Staff Hours Per 100 Units

Another measure of the level of resources attributed to project management is the number of staff hours available for every 100 units per week. Table 13.5 presents the number of

TABLE 13.5
STAFF HOURS PER 100 UNITS PER WEEK

PROJECT CHARACTERISTICS	TOTAL STAFF HOURS PER 100 UNITS PER WEEK	PROJECT MANAGER'S HOURS PER 100 UNITS PER WEEK	OTHER STAFF HOURS PER 100 UNITS PER WEEK	SAMPLE SIZE (n)
PROGRAM				
Section 79	113.4	54.6	59.8	(1,078)
Section 81/82	106.6	54.8	51.8	(2,462)
PROVINCE/TERRITORY				
Newfoundland	103.6	29.8	73.8	(155)
P.E.I.	122.0	61.3	60.7	(89)
Nova Scotia	111.5	55.6	55.9	(338)
New Brunswick	88.7	28.2	60.5	(105)
Quebec	122.5	63.8	58.7	(493)
Ontario	76.7	36.6	40.1	(1,017)
Manitoba	99.6	54.7	44.9	(248)
Saskatchewan	136.5	72.8	63.7	(448)
Alberta	136.4	74.6	61.8	(386)
B.C.	73.5	23.3	50.2	(83)
Yukon	-	-	-	-
N.W.T.	-	-	-	-
CLIENT				
Family	117.7	62.5	55.2	(1,547)
Senior	101.9	48.2	55.2	(1,840)
Family & Senior	94.0	51.5	42.5	(147)
PROJECT AGE				
Pre-1964	47.9	17.7	30.2	(65)
1964-1969	70.5	32.4	38.1	(283)
1970-1974	90.6	43.5	47.1	(960)
1975-1979	111.6	56.5	55.1	(1,364)
1980-1987	140.0	73.8	66.2	(868)
BUILDING TYPE				
Detached, Semi & Row	127.6	70.5	57.1	(1,578)
Low rise	111.2	51.5	59.7	(1,249)
High rise	52.9	16.8	36.0	(399)
Mixed (no high rise)	63.5	28.2	35.3	(90)
Mixed(with high rise)	53.5	16.1	37.4	(43)
PROJECT SIZE (UNITS)				
Less than 10	193.0	107.8	85.2	(625)
10 - 49	104.2	53.1	51.1	(2,069)
50 - 99	62.8	22.4	40.4	(421)
100 - 199	49.6	15.4	34.2	(295)
200 or more	40.4	9.5	30.9	(130)
SETTLEMENT SIZE				
Rural	140.7	76.7	64.0	(1,021)
2,500 - 9,999	128.6	72.2	56.4	(834)
10,000 - 29,999	86.0	37.0	49.0	(456)
30,000 - 99,999	73.5	24.5	49.0	(393)
100,000 - 499,999	53.5	19.0	34.5	(399)
500,000 or more	97.1	45.2	51.9	(437)
ALL	108.6	54.7	53.9	(3,540)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation, CMHC 1989.

staff hours per 100 units per week for both project managers and other staff. This table indicates that the level of staff resources decreases steadily for older projects. New Brunswick, Ontario and British Columbia, three provinces with older public housing stock, also have the lowest numbers of staff hours per 100 units in the country. This pattern may be attributed in part to the decline in the size of projects over the years. The number of staff hours per 100 units also decreases steadily as project size increases. At the same time, high-rise projects and projects with mixed building types, which are associated with larger projects, also have the lowest number of staff hours per 100 units. While there may be economies of scale associated with the management of larger projects and high-rise projects, it is questionable whether the savings are sufficient to fully explain staff resources about half the size of smaller projects and of projects composed of detached, semi-detached and row houses.

4. Experience and Accreditation of Project Managers

Experience and training of project managers are important features contributing to good management at the project level. Data for the average number of years as project manager, average number of years in property management and the percentage who have or are working towards an IREM, IHM or CPM[1] accreditation are shown in Tables 13.6 and 13.7.

Table 13.6 reviews years of experience in project management. On average, project managers have 6.1 years of experience in their present position and 1.3 years of other public housing management experience, indicating that project managers have a great deal of experience in their positions.

As shown in Table 13.7, almost three-quarters of all project managers do not have any property management experience outside of public housing. Most project managers therefore emerged through the program.

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[1] A Certified Property Manager (CPM) or other designation or accreditation from either the Institute of Housing Management (IHM) or the Institute of Real Estate Management (IREM).

TABLE 13.6
PUBLIC HOUSING PROJECT MANAGEMENT EXPERIENCE

	AVERAGE	SAMPLE SIZE (n)
Years as project manager	6.1	(4,011)
Years in other public housing management	1.3	-
Total Years of Involvement in Public Housing Management	7.4	(3,936)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

TABLE 13.7
YEARS IN PROPERTY MANAGEMENT EXCLUDING PUBLIC HOUSING
(PROJECT SAMPLE SIZE: n=3692, N=4074)

NUMBER OF YEARS	PERCENTAGE OF MANAGERS
None	72.3
1 - 5	10.4
Greater than 5	17.3
TOTAL	100.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Table 13.8 provides information on the levels of experience and accreditation of project managers by key project characteristics. Overall, there are no great differences in the years of experience as project manager across various characteristics of the public housing portfolio.

On average, project managers responsible for older projects have more management experience in public housing, which is to be expected. When the total number of years of experience in property management is examined, the difference disappears except for managers of the most recent projects.

Project managers of larger projects and of projects made up of high-rise buildings or mixed building types have more experience in the management of public housing. This may be due partially to the older average age of these projects, but also to higher requirements for public housing management experience in these projects. However, these differences almost disappear again when the total number of years in property management is considered.

TABLE 13.8
EXPERIENCE AND ACCREDITATION OF PROJECT MANAGERS

PROJECT CHARACTERISTICS	# OF YEARS IN PUBLIC HOUSING MGT	# OF YEARS IN PROPERTY MANAGEMENT	% ACCREDITED	% ACCREDITATION IN PROGRESS
PROGRAM				
Section 79	6.8	9.3	11.3	3.8
Section 81/82	7.6	10.1	10.3	4.6
PROVINCE/TERRITORY				
Newfoundland	8.7	9.5	0.0	0.0
P.E.I.	7.0	14.2	0.0	0.0
Nova Scotia	6.9	9.9	0.0	2.0
New Brunswick	5.8	14.8	0.0	0.0
Quebec	8.2	10.7	0.4	0.2
Ontario	9.2	10.8	38.1	17.4
Manitoba	8.5	11.8	20.1	4.2
Saskatchewan	6.7	9.6	16.5	3.5
Alberta	5.8	8.1	1.7	0.9
British Columbia	7.7	9.8	20.5	35.9
Yukon	3.0	3.2	0.0	0.0
N.W.T.	5.4	6.7	0.2	0.0
CLIENT				
Family	7.5	10.0	7.3	4.8
Senior	7.2	9.8	13.3	4.2
Family & Senior	8.4	10.5	7.4	3.4
PROJECT AGE				
Pre-1964	8.7	10.4	38.0	13.3
1964-1969	9.3	11.9	21.5	11.9
1970-1974	8.1	10.8	15.5	6.0
1975-1979	7.5	10.1	9.5	5.1
1980-1987	6.2	8.5	6.4	1.2
BUILDING TYPE				
Detached, Semi & Row	6.8	9.4	7.1	3.2
Low rise	7.4	9.9	6.5	4.3
High rise	8.0	10.4	34.2	7.1
Mixed (no high rise)	9.5	10.9	12.1	4.5
Mixed(with high rise)	10.3	11.6	13.3	7.6
PROJECT SIZE (UNITS)				
Less than 10	6.0	8.2	2.8	2.2
10 - 49	7.5	10.2	7.8	4.1
50 - 99	7.7	10.6	10.9	6.0
100 - 199	8.2	10.7	22.6	10.5
200 or more	8.6	10.2	56.8	5.8
SETTLEMENT SIZE				
Rural	6.7	9.1	3.8	1.5
2,500 - 9,999	7.5	10.6	6.4	5.5
10,000 - 29,000	8.6	10.9	15.3	6.6
30,000 - 99,999	8.0	10.0	15.7	14.0
100,000 - 499,999	8.4	10.6	37.1	14.2
500,000 or more	7.6	9.9	18.0	2.0
ALL	7.4	9.9	10.6	4.4
Sample Size (n)	(4,011)	(3,692)	(4,332)	(4,332)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

More differences exist across the public housing stock in the level of accreditation obtained or in progress for project managers. Overall, only 10.6 per cent of project managers are Certified Property Managers (CPM) or have received other designation or accreditation from either the Institute of Housing Management (IHM) or the Institute of Real Estate Management (IREM). Another 4.4 per cent of project managers are working toward one of these accreditations.

The most striking difference across the public housing stock is that almost all the project managers with an accredidation or working toward one are located in four provinces. Ontario, Manitoba, Saskatchewan and British Columbia together account for almost all accredited managers and managers working toward accreditation respectively.

The geographic concentration of accredited managers and managers pending accreditation makes any national analysis by other characteristics of the stock difficult. Table 13.9 examines the patterns of accreditation within those four provinces and presents the level of accreditation of managers by the age and size of projects. The level of accreditation increases with project age, although at a much slower rate

TABLE 13.9
PROJECT MANAGERS WITH ACCREDITATION
BY PROJECT AGE AND SIZE
(ONTARIO, MANITOBA, SASKATCHEWAN, BRITISH COLUMBIA)

	PER CENT ACCREDITED	PER CENT WITH ACCREDITATION IN PROGRESS
PROJECT AGE		
Pre-1964	44.5	14.2
1964-1969	26.1	13.8
1970-1974	30.7	12.0
1975-1979	22.1	12.1
1980-1987	22.7	2.5
PROJECT SIZE (UNITS)		
Under 10	7.6	6.2
10 - 49	20.2	9.9
50 - 99	27.3	15.9
100 - 199	35.8	17.8
200 or more	63.9	6.4
ALL	25.3	10.2
Sample Size (n)	(2,168)	(2,168)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

than exhibited in Table 13.8 for the country as a whole. On the other hand, the results for the four provinces confirm that a strong relationship exists between the level of accreditation of project managers and the size of public housing projects.

Table 13.10 shows that the highest level of formal education obtained by project managers is most commonly high school, trade school or community college completion. This varies little across key characteristics of the stock, therefore only the overall results are presented.

TABLE 13.10
FORMAL EDUCATION FOR PROJECT MANAGERS
(PER CENT)

LEVEL OF EDUCATION	% OF MANAGERS
Less than high school completion	14.5
High school graduate	22.6
Trade school/Community college	35.2
Some university	14.5
University degree	13.2
TOTAL	100.0
Sample Size (n)	(4,238)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

B. Management of the Physical Condition of the Stock

1. Postponement of Maintenance and M&I

The project management team can take actions to maintain the condition of the public housing stock through maintenance or Modernization and Improvement (M&I) activities. The postponement of either maintenance or M&I can have detrimental effects on the condition of the stock.

The postponement of maintenance constitutes a failure to maintain the physical condition of the stock. Postponement of maintenance is serious because project components may be left to deteriorate to the point where more serious repairs or even replacement, and thereby M&I expenditures, become necessary.

Modernization and improvement activities should address the planned replacement of components which are nearing the end of their physical or economic life. Therefore, the postponement of M&I activity should not have long term detrimental effects on the physical condition of the stock. However, the postponement of M&I activity year after year to the point where the component completely fails minimum property standards is detrimental to the condition of the stock.

The survey of public housing project managers indicated that maintenance was postponed in just under one-quarter (24.2 per cent) of public housing projects in 1987. It also indicated that M&I was postponed in more than one-third (34.0 per cent) of public housing projects from 1987 to another year.

Table 13.11 presents the reasons given by the project managers for these postponements. A lack of budget was reported as a reason for almost three-quarters of postponements of maintenance and for more than 80 per cent of postponements of M&I. Postponement to coincide with other work, which is a reasonable practice, was cited as a reason for 26.7 per cent of projects where maintenance was postponed and 19.5 per cent where M&I was postponed. Finally, a lack of skilled labour was a factor in 21.1 per cent of projects where maintenance was postponed and only 11.8 per cent where M&I was postponed.

TABLE 13.11
REASONS FOR POSTPONEMENT OF MAINTENANCE

	YES (%)	NO (%)	DON'T KNOW (%)	SAMPLE SIZE (n)
Lack of budget	73.3	26.5	0.2	(1,032)
Lack of skilled labour	21.1	74.7	4.2	(1,030)
Maintenance postponed to coincide with other work	26.7	66.5	6.8	(1,030)
Other	3.4	96.6	-	(1,035)

REASONS FOR POSTPONEMENT OF M&I ACTIVITIES

	YES (%)	NO (%)	DON'T KNOW (%)	SAMPLE SIZE (n)
Lack of budget	83.4	16.6	0.0	(1,444)
Lack of skilled labour	11.8	85.2	2.9	(1,440)
M&I postponed to coincide with other work	19.5	75.0	5.5	(1,438)
Other	4.9	95.1	-	(1,445)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Table 13.12 indicates whether projects where maintenance or M&I were postponed from 1987 to a later date were in worse condition than those projects where maintenance was not postponed. Statistical tests showed that only a very weak relationship exists between postponement of maintenance and poorer project condition, and that overall no relationship exists between postponement of M&I and poorer project condition. Continued postponement of maintenance and M&I, combined with the aging of the stock, may however be detrimental to the condition of the stock in the long term.

TABLE 13.12
POSTPONEMENT OF MAINTENANCE AND M&I BY CONDITION RATINGS
(PER CENT)

NHA STANDARDS	% OF PROJECTS WITH POSTPONED MAINTENANCE	% OF PROJECTS WITH POSTPONED M&I	(n)
Fails	24.2	24.8	(60)
Meets	29.7	40.7	(483)
Exceeds	25.6	30.3	(350)
ALL	27.6	35.3	(893)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989, and the Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Postponement of M&I is likely to be more tolerable for projects which are in better condition. Although no overall statistical relationship was found between postponed M&I and poorer project condition, there is evidence that the small number of projects which are in the very worst condition, had a higher incidence of postponed M&I.

Table 13.13 presents the incidence of postponement of maintenance and M&I by key project characteristics. Postponement of maintenance was found to be greater in large urban centres, large projects, more complex building types and in family projects. Postponement of M&I followed a similar trend, but was substantially higher for projects with 200 or more units and mixed projects with high-rise structures. The Physical Condition Survey indicated that these projects were in worse condition and required higher repair and replacement costs per unit. This and further evidence presented in Chapter VIII suggest that, although the postponement of M&I may not be a problem for the stock as a whole, it may be a

TABLE 13.13
POSTPONEMENT OF MAINTENANCE AND M&I BY PROJECT CHARACTERISTICS
(n=4332, N=4810)

PROJECT CHARACTERISTICS	POSTPONED MAINTENANCE (PER CENT)	POSTPONED M&I (PER CENT)	SAMPLE SIZE (n)
PROGRAM			
Section 79	17.8	27.2	(1,306)
Section 81/82	27.0	36.8	(3,026)
PROVINCE/TERRITORY			
Newfoundland	16.4	21.3	(162)
Prince Edward Island	11.2	28.0	(89)
Nova Scotia	16.1	16.9	(466)
New Brunswick	13.8	36.7	(125)
Quebec	17.8	34.9	(576)
Ontario	26.6	34.2	(1,248)
Manitoba	61.4	64.8	(305)
Saskatchewan	15.6	30.2	(525)
Alberta	22.7	28.2	(490)
British Columbia	14.7	36.4	(90)
Yukon	29.5	38.6	(13)
Northwest Territories	32.6	44.5	(243)
CLIENT			
Family	28.5	36.6	(2,030)
Senior	20.0	31.1	(2,121)
Family & Senior	23.8	35.9	(173)
PROJECT AGE			
Pre-1964	27.5	48.3	(77)
1964-1969	33.7	41.2	(343)
1970-1974	26.7	39.6	(1,202)
1975-1979	24.4	35.1	(1,627)
1980-1987	18.4	23.1	(1,087)
BUILDING TYPE			
Detached, Semi & Row	24.3	33.3	(2,023)
Low rise	21.4	30.6	(1,440)
High rise	27.6	44.1	(471)
Mixed (no high rise)	27.7	37.3	(106)
Mixed (with high rise)	40.7	66.9	(52)
PROJECT SIZE (UNITS)			
Less than 10	19.7	25.9	(820)
10 - 49	23.3	31.4	(2,507)
50 - 99	26.6	39.1	(505)
100 - 199	32.9	49.0	(332)
200 or more	39.6	70.2	(149)
SETTLEMENT SIZE			
Rural	24.2	35.6	(1,205)
2,500 - 9,999	17.4	24.9	(1,002)
10,000 - 29,999	21.8	31.2	(597)
30,000 - 99,999	21.5	27.3	(541)
100,000 - 499,999	37.4	46.2	(451)
500,000 or more	31.4	46.1	(536)
ALL	24.2	34.0	(4,332)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

problem for the small portion of the stock which is in the very worst condition and requires the highest levels of repair and replacement.

2. Budget and Staff Problems Identified by Project Manager

Managers were asked whether a lack of budget or a lack of skilled labour caused maintenance or M&I work to be postponed from 1987 to a later date. They were also asked whether they were satisfied with the total number of project staff. These indicators help to gauge the situation where the manager feels that the project could be better managed if these obstacles did not exist. The results are particularily interesting as they reveal relationships similar to those observed in the physical condition survey.

Table 13.14 indicates that family projects experienced a greater incidence of budget and staff limitations than seniors projects. Similarly, older projects have significantly higher incidence of budget and staff limitation problems. This is consistent with the results of the physical condition survey where family projects and older projects were both found to be in poorer physical condition.

Large public housing projects and those made up of mixed building types are more likely to have budget and staff problems. This is again consistent with findings from the Physical Condition Survey that these projects are in worse condition. These findings on budget and staff problems raise questions on the allocation of maintenance and M&I budgets.

Table 13.15 indicates a definite link between M&I budget postponement and project size, which suggests that budget allocation criteria and other constraints need to be examined by the partnership to determine the source of this problem. The extent to which budget funds appear to be allocated on the basis of objectives measures of need, such as physical condition, was examined in Chapter VIII.

Finally, Table 13.14 indicates that the lack of skilled labour was not a major problem for project managers with only 7.9 per cent of projects experiencing postponed maintenance or M&I because of a lack of skilled labour. Project manager dissatisfaction with the number of project staff was also low, at 12.1 per cent overall. Like in the case of postponement of maintenance and M&I because of lack of budget, managers were more dissatisfied with the number of staff in older projects, family projects, larger projects and projects composed of more complex building types. At the provincial level, managers were most dissatisfied with the number of project staff in Newfoundland, Prince Edward Island, Quebec, Ontario and the Northwest Territories.

TABLE 13.14
BUDGET AND STAFF PROBLEMS IDENTIFIED BY PROJECT MANAGER

	POSTPONED MAINTENANCE AND M&I		DISSATISFACTION WITH NUMBER OF PROJECT STAFF
PROJECT CHARACTERISTICS	LACK OF BUDGET A PROBLEM	LACK OF SKILLED LABOUR A PROBLEM	
		(% OF PROJECTS)	
PROGRAM			
Section 79	24.2	6.1	8.3
Section 81/82	40.9	8.7	13.8
PROVINCE/TERRITORY			
Newfoundland	27.6	1.2	15.8
Prince Edward Island	31.3	3.4	28.1
Nova Scotia	19.9	3.0	7.7
New Brunswick	41.4	0.0	2.7
Quebec	35.2	9.9	22.4
Ontario	37.2	10.8	15.5
Manitoba	78.8	9.0	5.5
Saskatchewan	18.3	8.4	3.3
Alberta	32.2	4.1	4.3
British Columbia	41.3	5.4	8.3
Yukon	22.7	15.9	0.0
N.W.T.	47.9	11.9	19.1
CLIENT			
Family	41.3	7.8	14.9
Senior	30.3	8.1	9.4
Family & Senior	38.1	8.1	11.7
PROJECT AGE			
Pre-1964	44.6	6.4	17.0
1964-1969	47.8	8.6	20.0
1970-1974	41.9	9.6	14.3
1975-1979	36.7	8.2	10.4
1980-1987	24.0	5.7	9.6
BUILDING TYPE			
Detached, Semi & Row	35.2	7.1	11.1
Low rise	30.9	9.6	10.7
High rise	48.2	7.2	17.0
Mixed (no high rise)	41.0	5.9	17.2
Mixed(with high rise)	66.9	7.7	28.2
PROJECT SIZE (UNITS)			
Less than 10	28.2	6.4	9.3
10 - 49	32.3	8.5	10.6
50 - 99	43.9	8.7	14.9
100 - 199	52.8	6.0	20.0
200 or more	75.6	8.7	26.6
SETTLEMENT SIZE			
Rural	34.2	10.1	7.8
2,500 - 9,999	24.6	6.6	11.0
10,000 - 29,000	32.2	7.7	11.1
30,000 - 99,999	31.4	6.2	17.1
100,000 - 499,999	55.8	10.0	23.7
500,000 or more	52.4	5.3	11.3
ALL	35.9	7.9	12.1
Sample Size (n)	(4,205)	(4,204)	(4,258)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC 1989.

TABLE 13.15
M&I POSTPONED DUE TO LACK OF BUDGET BY PROJECT SIZE

PROJECT SIZE	PROJECTS WHERE M&I POSTPONED %	SAMPLE SIZE (n)
Less than 10	22.5	(792)
10 - 49	25.9	(2,437)
50 - 99	35.3	(492)
100 - 199	43.6	(322)
200 or more	67.7	(147)
TOTAL	29.1	(4,209)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

3. Prioritizing Maintenance and M&I

The need to identify maintenance needs and M&I correctly and in a timely fashion is an important component of successful management of physical condition. The guidelines and support provided by the provinces to its local managers vary greatly. Some provinces provide direction and support, monitor the maintenance practices at projects, and require prioritized M&I planning, while other provinces leave project managers or LHA's to manage according to their own policies and practices. The guidelines and support provided by the provinces for setting maintenance and M&I priorities are examined in the next chapter.

This section examines the means used by project managers to identify maintenance and M&I priorities. Table 13.16 presents the responses of project managers to questions on prioritizing of maintenance and M&I.

Each of the means listed for setting maintenance and M&I priorities was used by a majority of project managers, with the exception of by-law enforcement and tenant requests which were used by just under 50 per cent of managers with regards to maintenance and M&I, respectively.

In the case of maintenance, tenant requests, physical inspections and employee reports were the most common methods of priority setting. On the other hand, physical inspections, employee reports and housing authority directives were the most common means to identify M&I priorities.

TABLE 13.16
MEANS USED TO IDENTIFY MAINTENANCE AND M&I PRIORITIES (PROJECTS)

MEANS OF IDENTIFYING PRIORITIES	PERCENTAGE OF PROJECTS		SAMPLE SIZE (n)
	YES	NO	
MAINTENANCE			
Tenant requests	87.5	12.5	(4,251)
Physical inspections	77.1	22.9	(4,234)
Employee reports	72.4	27.6	(4,230)
Pre-set schedules	58.6	41.5	(4,076)
Housing authority directives	53.4	46.6	(4,021)
By-law enforcement	48.6	51.4	(3,904)
M&I			
Physical inspections	80.3	19.7	(4,234)
Employee reports	66.9	33.1	(4,231)
Housing authority directives	63.9	36.1	(4,021)
Pre-set schedules	56.6	43.4	(4,077)
By-law enforcement	52.1	47.9	(3,904)
Tenant requests	46.8	53.2	(4,251)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

4. Assessment of Condition by Project Managers

A comparison of the differences in the way that inspectors and project managers rate project condition is another means of assessing management performance. Project managers who rate their projects as being in better condition than the inspector rating for the project may not be fully addressing the needs of their projects.

Managers were asked to rate the physical condition of their projects on the same 7 point scale used by inspectors for the physical condition survey. The results of the project managers' assessment of condition were different from the inspectors; with the majority of project managers rating their projects as exceeding minimum standards. The results of the two surveys are shown in Table 13.17.

Table 13.18 compares the project condition ratings given by the project managers and inspectors. Thirty-seven per cent of project managers give their project a higher rating than the inspector, 52.0 per cent give it the same rating and 11.0 per cent give their project a lower rating than the inspector.

TABLE 13.17
INSPECTORS' AND PROJECT MANAGERS' RATINGS OF PHYSICAL CONDITION (PROJECTS)

NHA STANDARDS	**INSPECTOR (%)**	**PROJECT MANAGER (%)**
Fails	3.5	2.9
Meets	52.8	33.4
Exceeds	43.7	63.7
TOTAL	100.0	100.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989; and, Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

TABLE 13.18
PROJECT MANAGER'S RATING OF PHYSICAL CONDITION COMPARED TO INSPECTOR'S RATING (PER CENT)

Project manager's rating is higher than the inspector's	37.0
Project manager's rating is the same as the inspector's	52.0
Project manager's rating is lower than the inspector's	11.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989; and, Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

With 37.0 per cent of project managers rating their projects more highly than the inspectors, there is a potential difference in the perception of a minimally acceptable standard of condition between the two groups. This difference is significant because there is an increased probability that the condition of projects will be maintained at a level lower than the NHA minimum standards if project managers perceive those standards to be lower. This may indicate a need for more training/communication designed to educate project managers on standards of condition and on how to assess the physical condition of their projects.

Table 13.19 indicates that in the matched file of inspector and manager ratings there are 59 projects that fail minimum NHA standards of physical condition. Only 2 project managers out of 59 (3.4 per cent) agree with this rating, while 33 (55.9 per cent) rate their projects as meeting the minimum standards and 24 (40.7 per cent) rate their projects as exceeding the standards.

TABLE 13.19

INSPECTOR RATES PROJECT

FAILS	**MEETS**	**EXCEEDS**
59 PROJECTS	474 PROJECTS	344 PROJECTS
2 managers agree with inspector's rating	18 managers would rate their project a FAIL	8 managers would rate their project a FAIL
33 think their project meets minimum standards	189 agree with the inspector's rating	70 think their project meets minimum stnds
24 think their project exceeds minimum standards	267 think their project exceeds minimum standards	266 agree with the inspector

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.
Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 13.20 shows that while 52 per cent of project managers were in agreement with inspectors on the assessment of physical condition, the rate varies considerably among provinces and territories. In the Yukon and the Northwest Territories, the project manager rated condition at a lower level in a much higher percentage of cases than for the rest of Canada. Conversely, in Alberta, Nova Scotia, New Brunswick and Quebec the project manager rated condition at a higher level in a considerably higher percentage of cases than average. Project managers in the remaining provinces were closer to the ratings of physical condition provided by the CMHC inspectors.

TABLE 13.20
PROJECT MANAGER'S RATINGS OF CONDITION COMPARED TO INSPECTOR'S BY PROVINCE AND TERRITORY

PROVINCE/ TERRITORY	HIGHER %	SAME %	LOWER %
Newfoundland	29.2	56.1	14.7
Prince Edward Island	42.1	47.4	10.5
Nova Scotia	58.4	36.4	5.2
New Brunswick	56.2	43.8	0.0
Quebec	49.1	42.5	8.4
Ontario	23.1	64.4	12.5
Manitoba	26.3	50.9	22.8
Saskatchewan	15.7	74.2	10.1
Alberta	58.9	38.5	2.6
British Columbia	35.3	56.9	7.8
Yukon	25.0	41.7	33.3
Northwest Territories	30.0	25.0	45.0
CANADA	37.0	52.1	10.9

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.
Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

C. Preparation of Public Housing Units for Occupancy

The time taken to prepare public housing units prior to occupancy can have an impact on the level of utilization of the stock. Managers were asked to indicate the amount of time, on average, needed to prepare a vacated unit for occupancy. The results are shown in Table 13.21. The average preparation time for a unit was 10.5 days; half of all units are ready for occupancy 1 week after the unit is vacated and more than three-quarters have a preparation time frame of 2 weeks or less. Only 8.7 per cent of units require more than 3 weeks to prepare.

Table 13.22 indicates that average unit preparation time varies by province and is highest in Prince Edward Island, Nova Scotia and Quebec. On the other hand, unit preparation time is lowest in Manitoba, Saskatchewan and British Columbia. Unit preparation time also appears to be lower where the rate of turnover is higher. Turnover rates are highest in the Prairie provinces and lowest in New Brunswick and Quebec.

TABLE 13.21
AVERAGE UNIT PREPARATION TIME

UNIT PREPARATION TIME	% OF PROJECTS
7 days or less	48.6
8 - 14 days	27.7
15 - 21 days	15.0
22 days or more	8.7
TOTAL	100.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

TABLE 13.22
AVERAGE UNIT PREPARATION TIME AND TURNOVER RATE BY PROVINCE AND TERRITORY

PROVINCE/TERRITORY	AVERAGE UNIT PREPARATION TIME (DAYS)	RATE OF TURNOVER (% OF UNITS)
Newfoundland	10.8	10.0
Prince Edward Island	17.2	12.4
Nova Scotia	12.7	12.1
New Brunswick	10.3	7.2
Quebec	17.2	8.3
Ontario	9.3	12.6
Manitoba	5.6	21.2
Saskatchewan	6.2	13.2
Alberta	10.8	19.7
British Columbia	7.1	11.7
Yukon	9.2	10.1
Northwest Territories	9.3	11.6
CANADA	10.5	13.1

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

The approximate amount of unit months lost in unit preparation time is less than one-half of one per cent of supply and is less than one per cent in the highest provinces. Therefore, it is not a major management performance issue. However, some of the unit preparation times reported by managers are very high; 6.8 per cent of units are in projects where managers reported using 30 days or more (on average) to prepare units.

D. Tenant Involvement in the Management of Public Housing Projects

This section examines tenant involvement in the management of public housing projects. More specifically, it examines the level of tenant involvement in various areas of project management, the attitudes and support of project managers toward tenant involvement, and the level of satisfaction of tenants with both the management of projects and their level of involvement.

Level of Tenant Involvement in Management

Table 13.23 presents the level of involvement of tenants in five areas of project management: 1) maintenance of grounds and common areas; 2) social and recreational programs; 3) office support and budgeting; 4) security; 5) protection against vandalism.

Table 13.23 indicates that the majority of public housing projects and units have some form of tenant involvement in social or recreational programs, protection against vandalism and project security. Tenants are also involved in the maintenance of grounds and common areas in the majority of projects but just less than 40 per cent of units. This is understandable as this type of involvement is more commmon in smaller projects composed of detached, semi-detached and row housing. Tenant involvement in office support and budgeting is much lower with only around 8 per cent of projects reporting some form of tenant involvement in this area.

The level of involvement varies between the family and senior client groups. Family projects have more involvement in the area of maintenance of grounds and common areas than seniors projects. On the other hand, seniors projects have more tenant involvement in social and recreational programs and in project security than family projects. The level of tenant involvement is generally the same in office support and budgeting and in protection against vandalism.

Table 13.24 presents the percentage of projects and units by the number of areas of tenant involvement in each project. Only a minority (13.7 per cent) of projects have no form of tenant involvement at all. Another 40 per cent of projects and units have tenant involvement in one or two areas of project management. Finally, approximately half of all projects and units have some form of tenant involvement in at least three areas of project management. The number of areas of tenant involvement does not vary significantly between family and seniors projects.

TABLE 13.23
PERCENTAGE OF PROJECTS AND OF PUBLIC HOUSING STOCK WITH SOME TENANT INVOLVEMENT IN KEY AREAS OF MANAGEMENT

AREAS OF PROJECT MANAGEMENT	PERCENTAGE OF PROJECTS	PERCENTAGE OF PUBLIC HOUSING STOCK (UNITS)	(n)
ALL PROJECTS			
Maintenance of grounds and common areas	52.4	37.8	(4,237)
Social/recreational programs	58.1	76.8	(4,161)
Office support and budgeting	8.3	10.7	(4,124)
Protection against vandalism	55.0	60.8	(4,138)
Security	50.4	51.6	(4,185)
One or more areas of involvement	86.3	91.5	(4,290)
FAMILY PROJECTS			
Maintenance of grounds and common areas	62.7	45.7	(1,988)
Social/recreational programs	38.9	60.9	(1,984)
Office support and budgeting	9.3	13.8	(1,939)
Protection against vandalism	55.3	56.4	(1,945)
Security	43.5	38.7	(1,950)
One or more areas of involvement	83.9	87.7	(2,007)
SENIORS PROJECTS			
Maintenance of grounds and common areas	42.6	31.2	(2,070)
Social/recreational programs	77.3	90.4	(2,051)
Office support and budgeting	6.5	6.8	(2,013)
Protection against vandalism	54.3	63.8	(2,017)
Security	57.6	63.3	(2,059)
One or more areas of involvement	88.9	95.1	(2,102)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

TABLE 13.24
PROJECT MANAGER ASSESSMENT OF LEVEL OF TENANT INVOLVEMENT
(n=4290, N=4763)

NUMBER OF AREAS OF TENANT INVOLVEMENT	PERCENTAGE OF PROJECTS	PERCENTAGE OF PUBLIC HOUSING STOCK (UNITS)
0	13.7	8.5
1	21.2	20.2
2	18.9	19.5
3	27.1	34.8
4	17.5	14.8
5	1.6	2.2
ALL	100.0	100.0

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Another indicator of tenant involvement is meetings between project staff and tenants or, in a more formal setting, tenant committees. Table 13.25 shows that general meetings between project staff and tenants occur in almost 40 per cent of all public housing projects, including close to 60 per cent of all units.

These meetings are more common in seniors projects than in family projects. Meetings take place in more than half of seniors projects, including close to 70 per cent of seniors units. On the other hand, they take place in only 26.1 per cent of family projects which include almost half of all family units.

General meetings between project staff and tenants are more common in larger public housing projects. While meetings occur in only in 24.4 per cent of projects with less than 10 units, they occur in over 80 per cent of projects with 200 or more units.

Table 13.25 also shows that meetings between project staff and tenant committees occur in only 15.9 per cent of public housing projects, including 37.1 per cent of all public housing units. This indicates that, although some form of tenant involvement exists in the majority of projects, this involvement is not necessarily formally organized through a tenant committee structure.

TABLE 13.25
INCIDENCE OF MEETINGS BETWEEN PROJECT STAFF AND TENANTS

	STAFF/TENANT GENERAL MEETINGS		STAFF/TENANT COMMITTEE MEETINGS		
	YES	NO	YES	NO	(n)
	(PERCENTAGE OF PROJECTS)				
CLIENT TYPE					
Family	26.1	73.9	12.9	87.1	(1,980)
Senior	51.7	48.3	19.1	80.8	(2,083)
PROJECT SIZE (UNITS)					
Less than 10	24.4	75.6	7.5	92.5	(801)
10 - 49	35.6	64.4	11.4	88.6	(2,450)
50 - 99	49.7	50.3	19.0	81.0	(498)
100 - 199	65.9	34.1	39.2	60.8	(327)
200 or more	80.7	19.3	73.3	26.7	(148)
ALL	39.0	61.0	15.9	84.1	(4,242)
	(PERCENTAGE OF STOCK (UNITS))				
CLIENT TYPE					
Family	48.0	52.0	33.4	66.6	(1,980)
Senior	69.4	30.6	42.4	57.6	(2,083)
PROJECT SIZE (UNITS)					
Less than 10	25.4	74.6	8.2	91.8	(801)
10 - 49	37.7	62.3	12.9	87.1	(2,450)
50 - 99	51.1	48.9	19.7	80.3	(498)
100 - 199	67.2	32.8	40.6	59.4	(327)
200 or more	83.0	17.0	73.3	26.7	(148)
ALL	59.2	40.8	37.1	62.9	(4,242)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Again, meetings between project staff and tenant committees are more common in seniors projects than in family projects. Meetings between project staff and tenant committees are also more common in larger public housing projects. While meetings occur in only in 7.5 per cent of projects with less than 10 units, they occur in close to 75 per cent of projects with 200 or more units.

Attitudes and Support of Project Managers toward Tenant Involvement

Table 13.26 presents information on the attitudes of project managers toward tenant involvement. Managers were asked whether thay agreed or not with four statements concerning tenant involvement in project management.

TABLE 13.26
PROJECT MANAGER OPINION ON TENANT ROLE IN PROJECT MANAGEMENT

	AGREE	DISAGREE (% OF PROJECTS)	NO OPINION	(n)
a) The manager and other staff should pay close attention to advice from individual tenants	75.0	16.1	8.9	(4,197)
b) There should be a tenant's organization which gives advice, offers suggestions and relays complaints to manager/staff	60.4	27.1	12.6	(4,223)
c) Tenants should have a major role in the running and management of a project	12.2	78.2	9.6	(4,209)
d) Tenants should have no role in the management of a project (i.e. this is the job of the manager and staff)	46.7	41.4	11.9	(4,162)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Managers in 75 per cent of public housing projects agreed that they should pay close attention to the advice of individual tenants. Furthermore, managers in over 60 per cent of projects agreed that tenants organizations should exist to provide advice and suggestions to the project management team.

However, the support of project managers for direct tenant involvement in the management of projects is much lower. Managers in close to half of public housing projects agreed that tenants should have no role in the management of their project. The opposition of project managers increases if major tenant involvement is considered. Managers in close to 80 per cent of projects disagreed with the statement that tenants should play a major role in the management of their project.

The following three tables examine whether the opinions of project managers vary depending on the current level of tenant involvement in the public housing projects under their responsibility.

Table 13.27 shows that managers' opposition to a major role for tenants in project management remains strong, at close to 75 per cent of projects or above, except for the very small number of projects where tenants are involved in all areas of management. Even for these projects, managers in less than half of the projects agree with a major role for tenants in project management.

TABLE 13.27
PROJECT MANAGER OPINION ON TENANT INVOLVEMENT BY CURRENT LEVEL OF TENANT INVOLVEMENT

NUMBER OF AREAS OF TENANT INVOLVEMENT	TENANTS SHOULD HAVE A MAJOR ROLE IN THE RUNNING OF THIS PROJECT: AGREE	DISAGREE (% OF PROJECTS)	NO OPINION	(n)
0	11.0	80.9	8.0	(548)
1	7.1	81.5	11.4	(888)
2	12.0	76.4	11.7	(794)
3	12.6	80.1	7.3	(1,159)
4	15.7	74.1	10.2	(738)
5	44.0	49.7	6.2	(66)
ALL	12.2	78.2	9.6	(4,193)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

On the other hand, Table 13.28 demonstrates that managers support the idea of tenants' organizations in more than half of projects irrespective of the current level of tenant involvement. At the same time, it also shows that managers' support for tenants' organizations increases with the current level of tenant involvement in their project. In fact, managers support the idea of tenants' organization in more than 70 per cent of projects where tenants are involved in four or more areas of project management.

TABLE 13.28
PROJECT MANAGER OPINION ON TENANT INVOLVEMENT BY CURRENT LEVEL OF TENANT INVOLVEMENT

	THERE SHOULD BE A TENANTS' ORGANIZATION WHICH GIVES ADVICE, OFFERS SUGGESTIONS AND RELAYS COMPLAINTS TO MANAGER/STAFF			
NUMBER OF AREAS OF TENANT INVOLVEMENT	AGREE	DISAGREE (% OF PROJECTS)	NO OPINION	(n)
0	56.4	28.8	14.8	(562)
1	49.8	32.1	18.1	(895)
2	66.4	21.3	12.3	(789)
3	58.4	32.3	9.3	(1,157)
4	71.3	18.6	10.1	(739)
5	81.5	16.9	1.5	(65)
ALL	60.4	27.2	12.5	(4,207)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Table 13.29 presents the percentage of projects where managers agree or disagree with the statement that tenants should have no major role in the management of their project. It shows that project managers are more likely to disagree with this statement in projects where tenants are involved in more areas of project management. In other words, project managers in projects where tenants are less involved are more likely to agree with the statement that tenants should have no role in project management.

TABLE 13.29
PROJECT MANAGER OPINION ON TENANT INVOLVEMENT BY CURRENT LEVEL OF TENANT INVOLVEMENT

NUMBER OF AREAS OF TENANT INVOLVEMENT	TENANTS SHOULD HAVE NO ROLE IN THE MANAGEMENT OF THIS PROJECT			
	AGREE	DISAGREE (% OF PROJECTS)	NO OPINION	(n)
0	51.3	36.8	11.8	(538)
1	59.2	26.2	14.5	(878)
2	42.3	43.4	14.3	(780)
3	42.8	47.4	9.8	(1,156)
4	41.9	47.8	10.2	(731)
5	16.7	78.7	4.6	(64)
ALL	46.7	41.3	11.9	(4,147)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Another indicator of the attitude of project management toward tenant involvement is whether support is provided for tenant meetings. Table 13.30 shows that support for tenant meetings is provided by management in just over one-quarter of public housing projects, including over half of all public housing units.

Management support for tenant meetings is more common in seniors projects than in family projects. Support is available in 40.0 per cent of seniors projects, including 64 per cent of seniors units, and in only 14.5 per cent of family projects, including close to 40 per cent of family units.

Management support for tenant meetings is also more common in larger public public housing projects. While such support is available in less than 7 per cent of projects with less than 10 units, it is available in almost 80 per cent of projects with 200 or more units.

TABLE 13.30
PROJECT MANAGEMENT SUPPORT[1] FOR TENANT MEETINGS

	SUPPORT PROVIDED FOR TENANT MEETINGS YES (% OF PROJECTS)	YES (% OF UNITS)	(n)
CLIENT TYPE			
Family	14.5	38.9	(1,970)
Senior	40.0	64.0	(2,068)
PROJECT SIZE (units)			
Less than 10	6.5	7.3	(797)
10 - 49	23.6	26.9	(2,432)
50 - 99	43.0	44.3	(496)
100 - 199	62.2	63.5	(326)
200 or more	79.9	79.1	(148)
ALL	27.5	52.5	(4,217)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

NOTE: [1] Support includes meeting space and materials.

The availability of meeting rooms is another indicator of support for tenant involvement. Table 13.31 shows that project managers assessed that meeting rooms were satisfactory in just over half of public housing projects, including close to 70 per cent all public housing units. Meetings room are not satisfactory in 7.0 per cent of projects, including 8.8 per cent of all units, or simply not available in 38.7 per cent of projects, including 21.5 per cent of all units.

Meeting rooms are less satisfactory and less available in family projects than in seniors projects. Meeting rooms are not available in 64.1 per cent of family projects, including 41.6 per cent of family units, and are not satisfactory in another 9.2 per cent of family projects, including 15.1 per cent of all family units. On the other hand, meeting rooms are not available in only 13.1 per cent of seniors projects, including 4.5 per cent of units, and are not satisfactory in less than 5 per cent of seniors projects or units.

Meeting rooms are less often available in smaller public housing projects. While meetings rooms are available in more than 97 per cent of projects with 200 units or more, they are not available in close to 60 per cent of projects with less than 10 units.

TABLE 13.31
AVAILABILITY OF MEETING ROOMS IN PUBLIC HOUSING PROJECTS

	AVAILABILITY OF MEETING ROOMS				
	NOT SATISFACTORY	SATISFACTORY	NOT AVAILABLE	DON'T KNOW	(n)
	(PERCENTAGE OF PROJECTS)				
CLIENT TYPE					
Family	9.2	21.8	64.1	4.8	(1,923)
Senior	4.9	81.5	13.1	0.5	(2,045)
PROJECT SIZE (UNITS)					
Less than 10	5.0	28.3	59.8	6.9	(286)
10 - 49	7.0	53.3	38.0	1.7	(1,390)
50 - 99	8.9	57.4	32.4	1.2	(772)
100 - 199	7.9	76.5	15.3	0.3	(1,582)
200 or more	10.9	85.5	2.9	0.7	(103)
ALL	7.0	51.7	38.7	2.6	(4,133)
	(PERCENTAGE OF STOCK (UNITS))				
CLIENT TYPE					
Family	15.1	47.1	41.6	2.6	(1,923)
Senior	3.8	91.5	4.5	0.1	(2,045)
PROJECT SIZE (UNITS)					
Less than 10	5.8	30.6	57.1	6.5	(286)
10 - 49	6.8	54.6	48.5	1.7	(1,390)
50 - 99	9.2	57.7	31.8	1.3	(772)
100 - 199	8.7	76.8	14.2	0.3	(1,582)
200 or more	11.0	86.1	2.2	0.7	(103)
ALL	8.8	68.5	21.5	1.2	(4,133)

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1989.

Tenant Satisfaction with Project Management

Chapter XI dealing with client satisfaction and the quality of life in public housing showed that close to 20 per cent of public housing tenants were dissatisfied with the way their project was run. Tenants were most dissatisfied with the performance of management with regard to security and the speed in handling requests. Families also expressed greater dissatisfaction with project management than did seniors. The following tables examine whether the level of satisfaction of tenants varies depending on the current level of involvement of tenants in the management of their project.

Table 13.32 presents the level of tenant satisfaction with the way their project is run by the number of areas of tenant involvement in the project. It shows that tenant satisfaction with the way the project is run remains around 80 per cent except in the small percentage of projects where tenants are involved in all five areas of project management. In those projects, tenant satisfaction with the way the project is run is lower at 65 per cent. However, no causal relationship can be established between level of involvement and satisfaction with project management as it remains unclear whether tenant dissatisfaction with project management leads to involvement, or whether involvement itself is a source of dissatisfaction.

TABLE 13.32
TENANT SATISFACTION WITH WAY PROJECT IS RUN BY CURRENT LEVEL OF TENANT INVOLVEMENT

NUMBER OF AREAS OF TENANT INVOLVEMENT	NOT SATISFIED (% OF TENANTS)	SATISFIED (% OF TENANTS)	(n)
0	17.3	82.7	(172)
1	22.3	77.7	(352)
2	14.9	85.1	(366)
3	16.4	83.6	(733)
4	18.0	82.0	(475)
5	34.8	65.2	(55)
ALL	18.1	81.9	(2,175)

SOURCE: Survey of Public Housing Project Managers, Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Table 13.33 examines further the level of tenant satisfaction on particular aspects of their public housing project depending on whether or not there is some form of tenant involvement in the management of these particular aspects of their project. The table clearly shows that the involvement of tenants in maintenance of grounds and common areas, in social or recreational programs, in security or in protection against vandalism does not seem to be associated with a significantly higher or lower level of tenant satisfaction in these areas or with their home overall. This was equally true for family and seniors clients.

TABLE 13.33
TENANT SATISFACTION BY TYPE OF TENANT INVOLVEMENT

	% OF TENANTS SATISFIED			
	TENANTS INVOLVED	(n)	TENANTS NOT INVOLVED	(n)
TENANTS INVOLVED IN MAINTENANCE OF GROUNDS AND COMMON AREAS				
Grounds around project	84.5	(998)	87.7	(1,221)
Maintenance of grounds and common areas	84.6	(991)	87.6	(1,241)
Home overall	90.1	(1,043)	89.9	(1,289)
TENANTS INVOLVED IN SOCIAL OR RECREATIONAL PROGRAMS				
Availability of shopping, recreation, health care	86.2	(1,720)	92.4	(462)
Info from project management on social/community services	86.9	(1,393)	69.6	(331)
Home overall	91.4	(1,803)	86.2	(475)
TENANTS INVOLVED IN SECURITY				
Security against crime and vandalism	80.8	(1,105)	70.5	(849)
Home overall	91.2	(1,300)	88.3	(995)
TENANTS INVOLVED IN PROTECTION AGAINST VANDALISM				
Security against crime and vandalism	78.2	(1,348)	72.0	(580)
Home overall	90.8	(1,593)	87.5	(674)

SOURCE: Survey of Public Housing Project Managers, Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

Table 13.34 presents tenants' opinions on whether they should play a greater role in management depending on their current level of involvement. It shows that, irrespective of their current level of involvement, approximately one-third of tenants are in favour of greater tenant involvement in the management of their project. At all levels of current involvement, a majority of decided tenants favoured greater tenant involvement. Over a third of surveyed tenants did not express an opinion for or against greater tenant involvement.

TABLE 13.34
TENANT OPINION ON LEVEL OF INVOLVEMENT BY CURRENT LEVEL OF TENANT INVOLVEMENT

NUMBER OF AREAS OF TENANT INVOLVEMENT	TENANTS SHOULD PLAY A GREATER ROLE IN THE MANAGEMENT OF THIS PROJECT				
	YES	NO	DON'T KNOW	N/A	
	(% OF TENANTS)				(n)
0	37.9	19.3	36.8	6.0	(179)
1	36.2	21.4	34.8	7.6	(349)
2	36.8	21.4	34.8	7.4	(382)
3	36.5	24.2	36.6	6.7	(764)
4	36.8	24.7	35.2	5.3	(466)
5	30.2	26.5	43.1	0.2	(54)
ALL	36.1	23.2	34.2	6.5	(2,194)

SOURCE: Survey of Public Housing Project Managers, Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

E. Summary

This chapter addressed management practices at the project level. It examined the level of staffing resources available, the management of physical condition, the management of unit preparation time, and finally, tenant involvement in the management of public housing projects.

The majority of project managers are responsible for portfolios of less than 100 public and social housing units. At the same time, less than a quarter of managers with larger portfolios manage more than three-quarters of all public housing units. Also, project managers of older family projects, which had a higher incidence of poor condition, are responsible for larger portfolios.

Overall, the incidence of projects with on-site offices is low at just under 20 per cent. Aggregate analysis at the national level did not identify any relationship between the existence of an on-site office and tenant satisfaction.

Travel time did not constitute a major problem with only 11 per cent of managers responsible for just over 20 per cent of the stock reporting problems with travel time. However, managers experienced more problems with travel time as the size of their portfolios increased.

The level of staff resources per 100 units was lower for older projects, larger projects as well as projects with high-rise buildings and a mix of building types. Although economies of scale may be associated with larger high-rise projects, it is questionable whether the savings are sufficiently large to account for their having lower staffing levels than for smaller projects or projects composed of detached, semi-detached and row housing.

Overall, managers have considerable experience with an average of 6.1 years as public housing project managers, and most managers emerged through the program. There are no great differences in the years of experience of project managers across various characteristics of the public housing portfolio.

The highest level of formal education obtained by project managers is most commonly high school, trade school and community college completion. Only one-tenth of managers are Certified Property Managers (CPM) or have received other designation or accreditation. Ontario, Manitoba, Saskatchewan and British Columbia account for almost all accredited managers. Within these four provinces, the level of accreditation increased for managers in older and larger projects.

The survey of public housing project managers indicated that maintenance and M&I were postponed respectively in 24.2 per cent and 34.0 per cent of public housing projects from 1987 to another year. A lack of budget was the most common reason, at over 75 per cent, for postponement of maintenance or M&I.

Although overall the analysis did not identify any strong relationship between postponement of maintenance and M&I and project condition, higher incidence of postponement was found for larger projects, more complex building types and family projects. These projects have a higher incidence of physical condition, staffing and budget problems.

This and further evidence presented in Chapter VIII suggest that postponement of M&I may be a problem for the small portion of the stock which is in the very worst condition and requires the highest level of repairs and replacements. Furthermore, a definite link between postponement of M&I because of lack of budget and project size was identified.

With respect to the management of condition, project managers showed a propensity to rate the condition of their projects higher than the ratings provided by CMHC inspectors. Projects may therefore be maintained at a lower level than they should be.

Unit preparation time was found to decrease as turnover increased. With less than 0.5 per cent of unit months lost to unit preparation, it was not a major management issue.

There is some form of tenant involvement in most public housing projects, but it is not always formalized through tenant committees. Only a minority of projects, 13.7 per cent, have no form of tenant involvement at all. The majority of public housing projects have some form of tenant involvement in the maintenance of grounds and common areas, social or recreational programs, protection against vandalism and project security. Tenant involvement in office support and budgeting is much lower with only 10.7 per cent of projects reporting some form of involvement in this area.

Although meetings between project staff and tenants occur in almost 40 per cent of projects, meetings between project staff and tenant committees occur in only 15.9 per cent of projects. This indicates that, although some form of tenant involvement exists in the majority of projects, this involvement is not necessarily organized through a tenant committee structure. Meetings are more common in seniors projects and in larger public housing projects.

Project managers are open to advice from tenants and to the formation of tenant committees. Managers in 75 per cent of projects agreed they should pay close attention to the advice of individual tenants. Furthermore, managers in over 60 per cent of projects agreed that tenant organizations should exist to provide advice and suggestions to the project management team.

The support of project managers for direct tenant involvement in the management of projects is much lower. Managers in close to half of public housing projects agreed that tenants should have no role in the management of their project. The opposition of project managers increases if major tenant involvement is considered. Managers in close to 80 per cent of projects disagreed with the statement that tenants should play a major role in the management of their project.

Project management provides support in the form of meeting space and materials for tenant meetings in just over one-quarter of public housing projects, including over half of all units. Support for tenant meetings is more common in seniors projects and in larger public housing projects.

Project managers assessed that meeting rooms were satisfactory in just over half of public housing projects, including close to 70 per cent of all public housing units. Meeting rooms are not satisfactory in 7.0 per cent of projects, including 8.8 per cent of all units, or simply not available in 38.7 per cent of projects, including 21.5 per cent of all units. Meeting rooms are more available in seniors projects and in larger projects.

More than 80 per cent of tenants are satisfied with the way their project is run. Tenants were most dissatisfied with the performance of management with regard to security and the speed in handling requests. Families also expressed greater dissatisfaction than did seniors.

Tenant satisfaction does not vary by their level of involvement, but tenants want a greater role in the running of their project. No causal relationship can be established between level of involvement and satisfaction with project management as it remains unclear whether tenant dissatisfaction with project management leads to involvement or whether involvement itself is a source of dissatisfaction.

Irrespective of their current level of involvement, approximately one-third of tenants are in favour of greater tenant involvement in the management of their project. The majority of decided tenants want more involvement, but over one-third of surveyed tenants did not express an opinion.

XIV MANAGEMENT PERFORMANCE: PROVINCIAL/TERRITORIAL SUPPORT

A. Introduction

Although CMHC is a major financial contributor to public housing in Canada, it does not manage the public housing portfolio, and has instituted few controls over its management. Through the federal, provincial and territorial agreements, responsibility for the management of the public housing portfolio in Canada is vested almost exclusively with the provinces and territories. A small number of important provisions are contained in these Agreements, mostly dealing with key aspects of the program such as use of the graduated rental scale and construction standards for buildings. A discussion of the Federal/Provincial/Territorial Agreements can be found in Appendix F. For the most part, however, provinces and territories and their agencies are responsible for management of the stock. As a result, management organization and practices have evolved differently in each province and territory.

This chapter evaluates the performance of various systems and practices employed by the provinces and territories in managing their public housing stocks, based on indicators of good management. To this end, analysis is based on data collected from four sources: 1) provincial and territorial program operations guidelines or manuals (where available); 2) discussions with provincial and territorial representatives; 3) the survey of public housing project managers; and 4) the survey of public housing tenants.

In order to examine provincial and territorial support for the management of the public housing stock, provincial and territorial programs and procedures in place at the time of data collection for the evaluation have been documented. It is fully acknowledged that program improvements have occurred since that time.

Study Approach

This chapter explores the management of the public housing portfolio at the provincial and territorial level, examining the organization of personnel and the division of responsibilities, the management support and operational requirements in place to encourage or ensure successful management of the stock.

The chapter is divided into seven sections; the first six sections cover six different areas of management of the public housing stock at the provincial and territorial level. These are: 1) the support which provinces and territories give to project level management; 2) the approach to tenant/project staff interaction in each province and territory; 3) the level of accreditation and training of project management; 4) the management of unit condition; 5) the management of project condition; and 6) the overall management planning for increased operational efficiency and effectiveness. Several indicators of good management are used for each of these areas. The indicators have been derived from previous research in housing and property management and from outside the housing field which shows that there is a strong relationship between the indicators and good management.

Each section first explains the importance and relevance of the area of management under study. Second, the individual indicators used to assess the performance of each province and territory are presented. Finally, the performance of the provinces and territories in the area of management is discussed. The study approach recognizes that, because of the provincial variation in the size and other characteristics of the stock, one management structure is not appropriate for all provinces.

The final section presents the analysis of the composite indicators developed for each area of management. In order to validate these composite indicators of management performance, these were analysed against project condition ratings from the Physical Condition Survey. This analysis not only ascertains the validity of the indicators chosen, but also identifies the areas of management which appear to have the greatest impact on the physical condition of public housing projects. The differences in the ways that provinces and territories manage their public housing portfolios will provide the opportunity to study the influences of various management approaches and practices on the state of the program.

As mentioned above, the analysis presented in this chapter recognizes the different approaches and structures in place to manage the public housing stock across the country. The structure of management organization in the provinces and territories follows two basic models. One model, the local housing authority model, has day-to-day management responsibility decentralized to the local housing authority level. Within this decentralization model, the provinces have varying degrees of influence and control over the activities of the local housing authorities. In the local housing authority model, a project manager has responsibility for day-to-day operation of the project. The second model involves direct management of the units by the province. In these cases, on-site project managers either do not exist (Newfoundland, New Brunswick) or they report directly to the staff at regional or head office (British Columbia, Prince Edward Island, seniors only).

B. Comprehensiveness of Support to Project Management

Consistent management and operation of the Public Housing Program is made difficult by the decentralization of authority to regional offices and local housing authorities, and by the physical dispersal of the stock. With decentralized authority, guidelines or policies are necessary to effect consistent decision-making with regard to tenant issues and the physical and financial management of the stock. Further, the physical dispersal of the program to communities within the provinces makes the communication of these policies and guidelines a challenge.

The advantages of decentralization are project-level decision-making capability which improve response times and local responsiveness to local conditions. Various forms of direction and support can be used by higher levels of authority to enhance the consistency with which policy is applied and to enhance the skills and knowledge of the people managing and maintaining the program at the local level. Support to lower levels of the organization may consist of written information (policies and guidelines), training, orientation, meetings for communication and feedback, and access to more specialized and experienced staff.

Consistency is expected to be gained by the communication of policy in an easy to access format and covering key issues that relate to project level management and operation. Enhanced skills and knowledge (including guidelines) at the project level will provide an increased likelihood of effective management. This is especially true for small projects where staff perform various functions from tenant relations to preventative maintenance; guidelines and skill development can provide the necessary information to make them effective at their jobs. Guidelines even for skilled people can align the individual's approach to the job, with the employer's.

Indicators of Comprehensiveness of Support to Project Management

Four main indicators are used to measure the comprehensive of support to project management. They are: 1) the existence of program operation manuals; 2) the existence of training programs and the communication of information to personnel; 3) the existence of maintenance guidelines; and 4) the number and type of staff at the provincial or regional office level.

Findings

The findings for the comprehensiveness of provincial and territorial support for project management are found in Matrix 1 (see Appendix G). This section assesses the state of public housing program manuals in use in 1988. Improvements to program manuals may have been made since this time.

Every province and territory has a project manual which provides some support to either the local housing authorities or the regional offices. The comprehensiveness of these manuals varies between provinces and territories. All four Atlantic provinces had comprehensive manuals except with respect to tenant relations and to maintenance in the case of Prince Edward Island. In addition, New Brunswick did not consider their manual to be up-to-date, and were in the process of re-writing it. The manuals of Quebec, Ontario, Manitoba, Saskatchewan and the Northwest Territories are comprehensive in all measured categories. Alberta's manual provides little support to the housing authorities and it was indicated that this was consistent with Alberta policy since local housing authorities were very autonomous. The manual of the Yukon is comprehensive except for tenant relations and maintenance (maintenance is contracted).

Including training costs in the local housing authority budgets is encouraged in all provinces, with the exception of Prince Edward Island, Saskatchewan and the Yukon. Prince Edward Island is the only province that does not either provide the training or state in its program manual that training is encouraged and that costs can be included in the budget. (Specific data on training courses taken by project managers can be found in the preceding chapter on project level management). Initiatives to bring together staff for seminars or communicating with project level staff through newsletters and conferences vary, but almost all provinces and territories have something of this nature. Provinces and territories who make a commitment to annual conferences or workshops for project managers are Nova Scotia, New Brunswick, Quebec, Ontario, Saskatchewan, British Columbia and the Yukon. In New Brunswick and British Columbia the meetings are for area managers, who act as project managers in their management structure.

Maintenance guidelines which describe the tasks involved in scheduled preventative maintenance along with the recommended frequency exist in Newfoundland, Nova Scotia, Ontario, British Columbia and the Northwest Territories. In Quebec the tasks are described for both cleaning and maintenance but the frequency is left to the discretion of the manager. However, there is a monitoring process that ensures maintenance is sufficient. The different instruments used for establishing maintenance guidelines are program manuals, frequency charts and routines described in job descriptions. In Manitoba, the guidelines go beyond task and frequency to include corrective measures in the case of problems. In the remaining provinces and territories (Prince Edward Island, New Brunswick, Saskatchewan and the Yukon), guidelines do not exist and maintenance is the responsibility of the project manager or other staff with no outside controls established over the work.

Maintenance activities are subsequently monitored by a maintenance manager or technician in Quebec, Manitoba, Saskatchewan (new initiative), British Columbia and the Northwest Territories.

Support to project management is easier to identify in the provinces and territories with local housing authorities and managers at the project level. In these jurisdictions, specialized staff at the regional or provincial and territorial level are made available to project staff when needed and are seen as a source of support. For Newfoundland, Prince Edward Island and New Brunswick where maintenance staff report to maintenance managers at the regional level and management is not decentralized to the project level, the support function is far less relevant.

Among the provinces and territories with project managers and local housing authorities, Nova Scotia, Quebec, Ontario, Saskatchewan, and the Northwest Territories stand out as providing a high level of specialized support. These provinces and territories provide staff at the regional or provincial and territorial level who, in addition to other responsibilities under other programs, are also intended to support program managers. In the other provinces and territories there are regional staff who are available, but support of local project managers is not a specific function. Prince Edward Island does not provide such support unless managers, upon their own initiative, contact provincial staff.

C. Tenant/Project Management Interaction

This section concerns the interaction between tenants and project staff, including tenant involvement in project management. The relationship between tenants and project staff goes beyond a typical landlord/tenant relationship, and may include such things as referral of tenants with social problems to appropriate agencies, staff involvement in tenant associations and rent rebates in periods of lower income as well as the normal collection of rent and responding to requests. With this myriad of possible interactions, it is difficult to ascertain the ideal relationship between tenants and project staff. There is evidence on tenant-project staff interaction and management performance which has been used to formulate indicators. Also, the more general goals of consultation and participation have been used to formulate indicators.

Indicators of Tenant/Project Management Interaction

Four indicators are used to measure the availability of staff and regularity of contact with tenants. They are: 1) whether project managers are on site or in the community; 2) whether large local housing authorities or regional offices have tenant relations officers (or equivalent); 3) whether funding and encouragement is provided for tenant associations; and 4) whether tenant representative(s) is(are) on the LHA Board of Directors.

Findings

Matrix 2 (Appendix G) provides information on the extent of tenant and project management interaction in public housing projects.

The percentage of projects with staff on site ranges from none in Prince Edward Island to 63 per cent in the Northwest Territories. While this indicator may be used to assess ease of contact between tenants and staff or general familiarity, on-site offices are not appropriate for all project types and sizes. Prince Edward Island, Newfoundland, Nova Scotia and New Brunswick all have less than 10 per cent of projects with on-site staff. In Newfoundland and New Brunswick where projects are managed by regional offices and in Prince Edward Island, where the largest project is 30 units, there are almost no on-site offices. Ontario and Saskatchewan have a higher percentage of projects with on-site offices at 12.5 per cent and 10.3 per cent of projects respectively. The remaining Western provinces, Quebec, the Yukon and the Northwest Territories have significantly higher percentages of projects with on-site offices. It is interesting to note that British Columbia, with the same management model as New Brunswick and Newfoundland, has on-site offices at 57 per cent of its projects, and it has full-time custodial staff on site at large projects and regularly scheduled office hours for the maintenance managers at others. The Northwest Territories, British Columbia and the Yukon have a much higher percentage of projects with on-site offices than the average across Canada.

For seven provinces, community or tenant relations workers are present in large local housing authorities at the regional office level. In Prince Edward Island, British Columbia, Yukon and the Northwest Territories they do not exist at either the local housing authority or regional level.

The funding and encouragement of tenant associations is not consistent across the country despite the fact that support for these associations is contained in the CMHC/provincial/territorial agreements and in the subsequent disentanglement guidelines. Provinces and territories which both fund and encourage associations are Newfoundland, Quebec, Ontario, Manitoba, British Columbia and the Yukon Territories. No funding or other support is given in Prince Edward Island and New Brunswick. Nova Scotia funds tenant associations but does not otherwise encourage tenant participation. In Saskatchewan tenant associations will be funded but only seniors associations are encouraged by project staff. The Northwest Territories have tenant associations with similar responsibilities as the local housing authorities, but with less overall authority.

Whether tenants are permitted to be on the Local Housing Authorities' Board of Directors is a relevant question in all provinces and territories except Newfoundland, seniors housing in Prince Edward Island, New Brunswick and British Columbia (i.e. where there are no LHA's). Of the remaining provinces and territories who operate under the LHA model, five have tenant representation on their Boards of Directors. (i.e. Quebec, Ontario, Manitoba, the Yukon and the Northwest Territories). Family projects in Saskatchewan and Prince Edward Island did not have tenants on the Boards, whereas Nova Scotia indicated that tenants were permitted.

D. Project Management Accreditation and Training

The management of public housing projects can be a complex task. Public housing project managers are called upon to deal with such diverse areas as property inspections, trades required to maintain the physical plant, budget planning and rent collection, and tenant relations. The level of training and accreditation in property management acquired by project managers will enhance the quality and consistency of management at individual public housing projects. Ultimately, it is the responsibility of the provinces and territories to ensure that accreditation and training programs are available and to encourage project managers to take advantage of these training opportunities.

Indicators of Project Management Accreditation and Training

Two indicators are used as measures of project management accreditation and training. They are: 1) The level of managers' accreditation; and 2) the percentage of managers who have taken courses in budget planning, tenant relations, property inspections and trades.

The emphasis in these indicators is on managing the public housing portfolio, rather than reacting to problems as they occur. Managers should be capable of identifying necessary action, evaluating options and planning for their projects. Accreditation from organizations, such as the Institute for Housing Management (IHM) or the Institute of Real Estate

Management (IREM) and other training relevant to the job will produce a more highly skilled manager and benefit the portfolio. The indicators of manager training and accreditation are from the project manager's questionnaire, and include the percentage of managers who have, or are working towards, IHM or IREM accreditation and the percentage of project managers who have taken courses in tenant relations, budget planning, property inspections and trades (plumbing, heating, electrical and carpentry).

Findings

Matrix 3 (Appendix G) presents information on the project management staff, activities and training.

The indicator on accreditation shows that while 10.6 per cent of project managers are accredited and 4.4 per cent have courses in progress, these managers are concentrated in Ontario, Manitoba, Saskatchewan and British Columbia. The remaining provinces and territories have either no managers with accreditation, or very few. Project manager training also varies significantly among provinces and territories although to a lesser degree than in the case of accreditation.

More than half (51.8 per cent) of the project managers across the country have taken a course in budget planning. This ranged from a low of 15 per cent in the Yukon to a high of 72 per cent in Prince Edward Island. Prince Edward Island, Quebec, Ontario, Saskatchewan, British Columbia and the Yukon all exceeded the average. The percentage of project managers with a course in tenant relations is slightly lower than budget planning, ranging from 0 per cent in the Yukon to 74 per cent in Ontario. Ontario, Prince Edward Island, British Columbia and Manitoba all exceeded the average.

The incidence of participation in property inspection courses follows a pattern similar to that observed for tenant relations courses. Prince Edward Island, British Columbia, Saskatchewan, Manitoba and Ontario have higher participation rates with Newfoundland, New Brunswick, and the two Territories ranking below the average. Newfoundland shows a weaker performance in this area, with only 6 per cent of project managers having a course in property inspection, compared to 40 per cent of property managers overall. In terms of trades courses, participation in Ontario and the Northwest Territories rank amongst the highest.

Newfoundland, Manitoba, British Columbia and the Northwest Territories arrange for training courses to be delivered to their employees. This would account for the percentage of project managers (at or near 100 per cent), who indicate they have taken other courses.

E. Management of Unit Condition

The management of unit condition is a large part of the overall task of maintaining the physical condition of the public housing stock. The Physical Condition Survey showed that over 35 per cent of total repair costs were for unit repair.

For project managers and others concerned with the management of the stock, management of the physical condition of the unit is subject to certain operational constraints that do not exist with other project components. Maintenance plans can be designed for buildings, sites and projects that include periodic cleaning and planned maintenance and checking for developing problems. For units, this is not possible. If the tenant does not properly care for the unit, the manager or other project staff have only limited opportunity to access the unit and complete the required work. In addition, tenants may fail to identify problems or developing problems. Failure to identify a developing problem or to call project staff for whatever reason can result in increased repair costs and more rapid physical deterioration. For these reasons, various efforts are required to ensure that repair staff are accessible to tenants, and to ensure that units are inspected periodically by project staff.

Indicators of Management of Unit Condition

Three indicators are used to measure the management of unit condition. They are: 1) the existence of periodic inspections and tenancy checks or maintenance visits; 2) the availability of staff on-site; and 3) control of the budget at the project level.

Findings

As shown in Matrix 4 (see Appendix G), the accessibility of staff varies by province and territory, and for large and small projects. In Prince Edward Island and New Brunswick there are no staff on site. However, Prince Edward Island has project managers who are available within the community. In New Brunswick, tenants must call the regional office to request that work be undertaken. Newfoundland and British Columbia do not employ project managers. But in both provinces, there are maintenance staff on site for large projects. In Nova Scotia and Quebec, large projects have on-site staff, and project managers are available to tenants in the smaller local housing authorities. In Ontario, Manitoba and Saskatchewan, projects managers or other staff are on site or in the community. In the Yukon and Northwest Territories the project managers and maintenance workers are available within the community. It should be recalled that the appropriateness of an on-site office varies according to the management structure in place, the size of projects and their physical dispersal.

Annual unit inspections (or more frequent) take place in almost all provinces and territories. The only exception is Alberta, for which information is not available concerning tenancy checks. The most interesting recommended procedure for staff accessibility to the unit was Saskatchewan's tenancy check. After three months of occupancy a manager visits a new tenant. This visit is intended to identify developing problems and allow for feedback to the tenant. Recommended practices similar to Saskatchewan's new tenant check were found in only a few provinces. Prince Edward Island has two visits, one within a week and one within a month of move-in. In the Yukon there are quarterly management visits which will satisfy some of the same objectives as a tenancy check. The visit will identify and solve developing problems, but the person making the visit in the Yukon is not the project manager, but a management contractor who is paid for every call. Occasional visits are recommended in the Northwest Territories.

With regard to the issue of budget control, those provinces without project managers or equivalent (Newfoundland, New Brunswick and British Columbia) do not have control of the budget at the project level. In Quebec, where local housing authorities are more autonomous, the project managers and/or boards have control over the budget. In Prince Edward Island, Ontario, Manitoba, Saskatchewan and the Yukon the project managers also manage the budget, although the regional or provincial managers may have some control over planning and budget review. In Nova Scotia and the Northwest Territories, some project managers manage the budget while others do not. In Nova Scotia, the budgets for very small local housing authorities are prepared by the manager at the provincial level. In the Northwest Territories, if managers can prepare and manage the budget, they will be given the responsiblity.

F. Management of Project Condition

This section examines the requirements put in place by the provinces and territories to encourage LHA's to manage the increasing repair requirements of the stock. This section's indicators overlap with the previous section on managing unit condition, and the next section, which looks at provincial and territorial involvement, both in the physical management and operational considerations such as vacancies and arrears. The issues in this section relate specifically to requirements that the province or territory can put in place to encourage the LHA or regional office to manage project condition. The information was obtained from provincial and territorial officials, as well as evidence from the project manager's questionnaire on the manner in which planning for the maintenance of physical condition is performed.

Indicator of Management of Project Condition

Four indicators are used to measure management of project condition. They are: 1) the existence of plans for modernization and improvements (M&I); and 2) whether the province or territory asks for reports on repair costs to units and equipment, and on preventative maintenance performed; 3) whether the province or territory has a monitoring system to establish the appropriateness and the adequacy of maintenance practices; and 4) whether physical inspections and pre-set schedules are used to prioritize and plan modernization and improvement activities.

Findings

Matrix 5 (Appendix G) presents information on the management of project condition.

Planning modernization and improvement for a minimum three year period is a requirement in Newfoundland, New Brunswick, Quebec, Ontario, Saskatchewan, British Columbia and in the Yukon and Northwest Territories. Planning periods are three years in duration except in Saskatchewan, the Yukon and the Northwest Territories, where they are for four or five years. Planning takes place at the local housing authority level, except in New Brunswick and British Columbia, who do not follow the local housing authority model. Prince Edward Island, Nova Scotia and Manitoba do not have a requirement for such planning.

Responsiveness of management to physical deterioration is answered to some degree by the results of the Physical Condition Survey. Further indicators, shown in Matrix 5, indicate the varied approaches to monitoring of physical condition. Informal reviews of physical condition, without monitoring of the preventative maintenance system (where it exists) describe the approach in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, and the Yukon. In Manitoba, monitoring is held back by a lack of personnel, but it is recognized as desireable. The remaining provinces and territories (Quebec, Ontario, Manitoba, Saskatchewan, British Columbia and the Northwest Territories) have monitoring procedures in place.

G. Management Planning

Management plans are vehicles for assessing and evaluating present operations and planning for more efficient operations in the future. Management planning would be beneficial to the Public Housing Program in several respects, including providing the province with a 'big picture' of operations and condition in each local housing authority and region. The benefits of a provincially or territorially coordinated management planning exercise are very similar to the benefits of M&I planning already discussed in the previous section. Basically, recognition of a project's present state (whether financial, operational or physical), completion of an evaluation and an analysis of options should all lead managers to improvements in management. Coordination of the management planning exercise is appropriately placed at the provincial or territorial level, where staff reviewing the plans would be exposed to the different approaches to solving problems in each local housing authority or region.

Several aspects of management which would be addressed in management plans would be: tenant placement and waiting lists, occupancy (turnover and vacancy, unit re-let times), physical condition (of units and projects) and financial issues such as arrears, cost of repairs, M&I, staff, energy, lost revenue due to vacancy. The present state of the project would be assessed, and evaluated in light of external or uncontrollable influences. By planning on a local housing authority, or regional, basis each portfolio's differences will be accounted for in the planning process, so that appropriate goals are established. In order to reinforce the management planning exercise, project or area managers' performance appraisals could be based on reaching goals established in the management plan.

The final steps of planning and goal setting would be performed in collaboration with the province or territory. Provincial or territorial input is desireable as a means of ensuring that the proposed plans are feasible and cost efficient. The province or territory could also recommend alternate courses of action where necessary, based on the experiences of other local housing authorities or regions.

Compatible tools in the absence of or in addition to management plans are monitoring and reporting (or audit) practices. (Monitoring of maintenance practices has already been discussed in the previous section).

Indicators of Management Planning

In order to capture management planning, monitoring and operational audit activities that take place in the provinces and territories, four questions were asked on reporting, goal setting, monitoring and evaluation, and financial reporting. These are:

1. Are there reports from local housing authorities or regions to the province/territory on the following: occupancy, arrears, physical condition of units and/or exterior, waiting list and client placement?

2. Are goals established annually for the management efficiency of each local housing authority or region on

such things as unit re-let times, rent arrears, occupancy, improvements, inspections, etc?

3. Are local housing authorities or regions monitored and evaluated, with comparisons to similar local housing authorities?

4. Are there monthly or annual financial reports to be completed by each local housing authority or region on rent collection and arrears, budget tracking, repair costs to units and repair costs to equipment?

It was also asked whether there are performance appraisals based on a specific management plan.

Findings

Matrix 6 (Appendix G) presents information on management planning.

Planning for improved operations takes place formally only in Newfoundland and Ontario. In Newfoundland, goals are set annually for each regional office, and performance is monitored and evaluated monthly through the reporting system. Ontario's Standards to Success is a management improvement program which includes measuring performance, comparing similar local housing authorities and formal goal setting. This program is new, and was preceded by the Ontario Management Standards Program, which did not have the same emphasis on comparisons between LHA's.

Both New Brunswick and Prince Edward Island reported that although goal setting was not a formal process, the thoroughness of monitoring or the communication of goals, respectively, were informal processes of goal setting. The remaining provinces and territories, who all undertake some management review functions, do not have planning processes which include goal setting.

Extensive reporting of both operational (occupancy, physical condition, waiting list, client placement) and financial activities (arrears, budget tracking, repair costs) takes place in Newfoundland, Ontario, Quebec, Manitoba, Saskatchewan and the Northwest Territories. All of these provinces and territories also monitor and evaluate using these reports. The only province which has no reporting and review is Prince Edward Island. However, with seniors housing managed directly by the Corporation and the small portfolio of family housing in a small area, monitoring and reporting are considerably less important than in other provinces and territories. The remaining provinces and territories have reporting and monitoring systems in place for a limited number of operational and financial concerns. In Nova Scotia, regional managers monitor local housing authorities and perform annual management reviews of each local housing authority to determine whether performance is satisfactory.

Ontario is the only province where a project manager's performance appraisal is based on a specific management plan. Again, this is a new initiative and the Management Standards Program in place from 1980-1988 did not have this feature.

H. Composite Indicators of Management Performance

The indicators discussed in the previous sections of this chapter were used to develop composite indicators for each area of public housing management under study. For the purpose of this exercise, ratings on each of the composite indicators was given for each province or territory. It should be noted that this exercise was completed in the context of identifying potential areas for improvement in the management of the stock. These ratings do not reflect any detailed examination or audit of the performance of individual provinces or territories, and therefore are not reported.

The purpose of this section is, therefore, to examine if good or bad performance in the various aspects of public housing management at the provincial and territorial level can be linked to better or worse condition of the stock when controlling for factors such as the age of the stock and the type of client served. The existence of such relationships would first validate further the use of these composite indicators for management performance, and second, identify areas of management for which good performance appears to be related to the good condition of the public housing stock.

The age of public housing projects and the type of clients served are likely to have a strong impact on the type of relationships found between the composite indicators of management performance and project condition. For this reason, each composite indicator of management performance was tested against project condition controlling for project age and client type using cross-tabular statistical tests and logistic regression analysis.

Table 14.1 presents the percentage of public housing projects by rating of comprehensiveness of provincial and territorial support for project management and project condition. The results show that provinces or territories which meet or exceed the criteria set for comprehensiveness of support to project management are more likely to have projects exceeding NHA Minimum Property Standards.

TABLE 14.1
COMPREHENSIVENESS OF PROVINCIAL/TERRITORIAL SUPPORT TO PROJECT MANAGEMENT BY PROJECT CONDITION
(n=997, N=4,781)

	COMPREHENSIVENESS OF SUPPORT (% OF PROJECTS)		
NHA STANDARDS	FAILS (N=776)	MEETS (N=1,152)	EXCEEDS (N=2,853)
Fails	3.7	9.1	2.4
Meets	72.4	55.0	47.8
Exceeds	23.9	35.9	49.8
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

The relationship between comprehensiveness of support and project condition is stronger when controlling for the age of public housing projects. The relationship is weaker for family projects and stronger for seniors projects. Finally, statistical analysis show that the strongest relationship between comprehensiveness of support for project management and project condition is for seniors projects when controlling for the age of projects.[1]

Table 14.2 presents the percentage of public housing projects by level of tenant/project management interaction and project condition. Although provinces and territories which meet or exceed the criteria for interaction have a higher incidence of projects which exceed NHA standards, the relationship is a weak one. The relationship remains weak when controlling for the age of projects, but is stronger when controlling for client type. The relationship is strongest for senior projects, especially when controlling for the age of projects.

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[1] Full results of the statistical analysis conducted on the composite indicators of management performance can be found in Appendix H.

TABLE 14.2
TENANT/PROJECT MANAGEMENT INTERACTION BY PROJECT CONDITION
(n=997, N=4,781)

	TENANT/PROJECT MANAGEMENT INTERACTION (% OF PROJECTS)		
NHA STANDARDS	FAILS (N=776)	MEETS (N=1,152)	EXCEEDS (N=2,853)
Fails	3.7	5.0	2.9
Meets	72.4	44.1	51.0
Exceeds	23.9	50.9	46.1
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 14.3 presents the percentage of public housing projects by the level of accreditation and training of project managers and project condition. All provinces and territories at least meet the criteria set for this composite indicator. The table shows that public housing projects in provinces and territories which exceed the criteria are likely to be in better condition than projects in provinces and territories which only meet the criteria. Again, this relationship is

TABLE 14.3
ACCREDITATION AND TRAINING OF PROJECT MANAGERS BY PROJECT CONDITION
(n=997, N=4,781)

	MANAGERS' ACCREDITATION AND TRAINING (% OF PROJECTS)		
NHA STANDARDS	FAILS (N=0)	MEETS (N=2,446)	EXCEEDS (N=2,335)
Fails	-	5.8	1.1
Meets	-	64.2	40.9
Exceeds	-	29.9	58.0
TOTAL	-	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

stronger for seniors projects although the relationship is strong for both client groups when controlling for project age.

Table 14.4 presents the percentage of public housing projects by management of unit condition and ratings of unit condition. The table shows that public housing units in provinces and territories which exceed the criteria set for management of unit condition are overall in better condition than units in provinces and territories which just meet or fail to meet the criteria.

Overall, there is a strong relationship between good management of unit condition and good unit condition for both family and seniors projects. The relationships are even stronger when controlling for the age of the units.

TABLE 14.4
MANAGEMENT OF UNIT CONDITION
BY UNIT CONDITION
(n=2,468, N=204,709)

	MANAGEMENT OF UNIT CONDITION (% OF UNITS)		
NHA STANDARDS	**FAILS (N=17,034)**	**MEETS (N=4,171)**	**EXCEEDS (N=183,504)**
Fails	3.0	13.0	3.8
Meets	77.4	59.9	44.3
Exceeds	19.6	27.1	51.9
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

Table 14.5 presents the percentage of public housing projects by management of project condition and ratings of project condition. The table shows that projects in provinces and territories which meet or exceed the criteria are likely to be in better condition than projects in provinces and territories which fail to meet the criteria. There is no significant difference between provinces and territories which just meet the criteria and those which exceed.

When comparing provinces and territories which fail or just meet the criteria with those exceeding the criteria, there is a very weak relationship between management of project condition and condition ratings for family projects, but a

TABLE 14.5
MANAGEMENT OF PROJECT CONDITION BY PROJECT CONDITION
(n=997, N=4,781)

NHA STANDARDS	MANAGEMENT OF PROJECT CONDITION (% OF PROJECTS) FAILS (N=1,586)	MEETS (N=1,142)	EXCEEDS (N=2,053)
Fails	5.2	1.7	3.3
Meets	69.6	42.4	45.6
Exceeds	25.2	55.9	51.1
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

stronger relationship for seniors projects. The relationship for seniors projects is stronger when controlling for project age.

Table 14.6 presents the percentage of public housing projects by performance in management planning and project condition. The table clearly indicates that there is a strong relationship between good performance in management planning and the good condition of public housing projects. Statistical testing confirms that this relationship holds for both family and seniors projects and is very strong when controlling for age.

So far, relationships of various strengths have been found between all six composite indicators of management performance. These relationships, combined with previous research which led to the choice of the individual indicators, validate the use of the composite indicators as broad indicators of management performance.

Furthermore, strong relationships have been identified between three of the six indicators of management performance and project condition. These are: 1) accreditation and training of project managers; 2) management of unit condition; and 3) management planning. The strength of these relationships was confirmed by logistic regression analysis including the

TABLE 14.6
MANAGEMENT PLANNING BY PROJECT CONDITION
(n=997, N=4,781)

NHA STANDARDS	MANAGEMENT PLANNING (% OF PROJECTS) FAILS (N=897)	MEETS (N=2,385)	EXCEEDS (N=1,499)
Fails	4.0	4.5	1.7
Meets	72.4	57.0	34.5
Exceeds	23.6	38.5	63.8
TOTAL	100.0	100.0	100.0

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

composite indicators of management performance,[1] age of projects, type of clients served and other variables such as past levels of maintenance and M&I spending per unit. In fact, logistic regression results showed that a model including the age of projects, the type of clients served, performance on management planning and performance on accreditation and training of project managers explained more variation in the condition of the public housing stock than any other models examined in the course of the evaluation.

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[1] The composite indicator of management of unit condition was not included in the logistic regression models as it relates to the condition of public housing units and not the condition of public housing projects which is the dependent variable in the analysis.

I. Summary

The Public Housing Programs have evolved from the federal/provincial and territorial operating agreements. These agreements were initially developed for the delivery of new housing and include few references to how the public housing portfolio should be managed. As a result each provincial and territorial management program has evolved differently.

The support provided by provincial and territorial governments to assist local housing authorities in managing their portfolios has been reviewed. Six categories of management were included: comprehensiveness of support to project management; tenant/project management interaction; project management staff, activities and training; management of unit condition; management of project condition; and management planning.

The provinces and territories provided local housing authorities with sound program manuals and training and communication programs. All provinces and territories had program manuals, although most were lacking in one area or another (ie. tenant relations, maintenance). Training was encouraged, funding assistance provided or internal programs offered in most provinces and territories. Similarly, in most provinces and territories, staff support was available at the regional or provincial and territorial levels. Maintenance guidelines were found to be a weakness in provincial and territorial support, either because maintenance guidelines were incomplete or because they did not include follow-up monitoring.

Provincial or territorial support for tenant/project management interaction was generally found to be strong. Where portfolio or project size warrants, projects have on-site offices and community resource workers. Involvement of tenants on boards and associations and in project management is also significant.

Very few provinces and territories have project managers with property management accreditation either complete or in progress; however, project managers in most provinces and territories have pursued courses in budget planning, tenant relations, property inspections or trades.

With regards to the management of unit condition, most provinces and territories did not have adequate guidelines governing unit inspections and tenancy checks. Similarly, many provinces and territories did not have adequate means of permitting tenants to contact project staff. In most cases project managers controlled maintenance budgets at the project level, ensuring greater responsiveness to tenant requests.

Most provinces and territories had three to five year modernization and improvement (M&I) plans to assist in managing project condition; however, very few provinces and territories encourage the reporting of repair costs to promote preventative maintenance or monitor maintenance practices. Employee reports at the project level are used by most project managers to set M&I priorities.

In the area of management planning, planning for improved operations is a formal process in only two provinces and an informal process in two others. The remaining provinces and territories all undertake some management review functions, but do not have planning processes which include goal setting.

Several provinces and territories have extensive reporting of both operational and financial activities. All remaining provinces and territories, except one, have monitoring systems in place for a limited number of operational and financial concerns. Finally, only in one province is a project manager's performance appraisal based on a specific management plan.

Statistical tests on the composite indicators of management performance identified strong relationships between three of the six indicators of management performance and project condition. These are: 1) accreditation and training of project managers; 2) management of unit condition; and 3) management planning. In fact, logistic regression results showed that a model including the age of projects, the type of clients served, the performance on management planning and the performance on accreditation and training of project managers as explanatory variables explained more variation in the condition of the public housing stock than any other models examined in the course of the evaluation.

These results show that efforts can be made at both the provincial and territorial and project level which will have a positive effect on management of the program. Although few manage the stock directly, the provinces and territories can effect a great deal of change by recommending procedures to project level staff, increasing their monitoring of the program and providing more training and other forms of support to project level management. Provinces and territories also have the ability to further address issues such as tenant participation in project management.

XV PROGRAM COSTS

A. Introduction

Previous chapters have focussed on the results of the Public Housing Program and the extent to which objectives have been achieved. This chapter examines the program costs and subsidies involved in operating the public housing portfolio. The objectives of this chapter are to identify the principal factors impinging on overall levels of operating expenditures, to establish the extent to which operating costs are increasing or declining, to identify high cost components of the public housing portfolio and to isolate the principal factors contributing to high cost projects.

The budget and claims settlement processes (e.g. budget development process, cost control measures, flexibility provisions, claims settlement process and cost-sharing mechanisms) are reviewed first in order to establish how decisions regarding operating costs are made. Next, the composition of public housing operating budgets for 1986 are assessed to establish the relative cost of various aspects of the operation of the portfolio. Having reviewed the budget process and the principal components of operating budgets, temporal trends in operating expenditures, revenues and operating losses over the 1979-1986 period are examined to determine whether the cost of operating the portfolio is increasing or decreasing and whether a shift in the allocation of operating expenditures among the various components of operating budgets has occurred. Finally, cross-sectional variation in annual operating expenditures, revenues and operating losses per unit for the 1979-1986 period is examined in order to isolate high cost components of the portfolio and to assess what factors may be responsible.

The analysis of operating expenditures for public housing projects contained in this chapter draws almost exclusively on the data assembled in the Administrative Expense Data Base. Developed specifically for this evaluation, the Administrative Expense Data Base contains project level operating expense data obtained from the Program Portfolio Management Division of CMHC and provincial and territorial housing agencies.

B. Public Housing Operating Budgets

The Budget Development Process

As is the case with the management of the public housing portfolio generally, the responsibility for the preparation of public housing operating budgets lies with provincial and territorial housing corporations. Where responsibilities for day-to-day management have been further delegated to local housing authorities, these organizations assume this responsibility for the projects under their management.

Project budgets prepared by local housing authorities are reviewed by provincial housing corporations to ensure that proposed expenditures fall within program guidelines. Each provincial and territorial housing corporation submits a consolidated portfolio budget to CMHC, certifying that the appropriate guidelines have been adhered to. Where a significant increase over the previous year's budget is proposed, an explanation is required.

In cases where the approved budget proves to be inadequate due, for example, to unanticipated emergency repairs or increases in utility costs, local housing authorities may submit supplementary budgets to provincial housing agencies. A small appropriation is included in the CMHC Program Portfolio Management Division's annual budget forecasts to cover such contingencies.

Composition of Project Budgets

Public housing operating budgets are comprised of seven principal categories of expenditures.

(i) Taxes
(ii) Utility Costs
(iii) Operating Costs
(iv) Maintenance
(v) Modernization and Improvements (M&I)
(vi) Amortization
(vii) Administration

The precise composition of each of these budget categories is outlined in Figures 1 and 2.

FIGURE 1
OPERATING EXPENDITURE CATEGORIES

(i) Taxes

Municipal Taxes
Local Improvement Charges

(ii) Utility Costs

Electricity
Water
Heating, Fuel and Labour

(iii) Operating Costs

Janitor - Material and Labour
Ground Expenses - Material and Labour
Equipment
Security
Waste Removal
Social and Recreational Facilities
Direct Labour Costs - Tenant Placement & Community Relations Officers
Interest Costs on Negative Cash Flow
Tenant Association Grants
Insurance - Fire and Public Liability

(iv) Maintenance

Building Material and Labour
Heating, Ventilation and Plumbing
Appliance Repair
Electrical Systems
Elevators
Social and Recreational Facilities
Painting

(v) Modernization and Improvements (M&I)

Replacements
Modernization
Improvements

(vi) Amortization

Payments on Principal
Interest Charges

(vii) Administration

Local Housing Authority Costs
Provincial Housing Corporation Costs

SOURCE: "Disentanglement of the Budget Review and Claim Approval Process for the Public Housing Program", CMHC, 1981.

FIGURE 2
ELIGIBLE ADMINISTRATIVE COSTS

(a) Local Housing Authority Costs

Equipment, office rental, office supplies, furniture, travel and fringe benefits associated with the following:

- Clerical and Support Staff
- Manager's Salary
- Collection of Rents
- Payment of Bills
- Preparation of Budgets
- Maintenance of Books and Records
- Verification of Incomes

(b) Provincial Housing Corporation Costs

Salaries, fringe benefits, travel, telephone, telex, office supplies, office rent and other support services for the following groups:

- Corporate Secretary
- Architecture Branch
- Appraisal Branch
- Audit Branch
- Finance Branch
- Legal Branch
- Personnel Branch
- Housing Management
- Supply Operation of Purchasing Branch
- Office Services Branch
- Community Relations Branch
- Communications Branch

SOURCE: "Disentanglement of the Budget Review and Claim Approval Process for the Public Housing Program", CMHC, 1981.

Cost Control Measures

Cost controls in place during the project development phase consisted of guidelines which stipulated that acquired projects were not to exceed current market value and the cost of new construction was to be "reasonable". In the latter part of the 1970's, capital cost controls were formalized through the use of Maximum Unit Prices which were used to ensure that projects were "modest". The use of competitive processes, such as public tendering and builders' proposals, were used to ensure that value for money was achieved.

Fewer explicit cost control guidelines exist for the operating phase, a reflection of the fact that responsibility for day-to-day administration was vested with provincial and territorial housing agencies. Only general guidelines exist with respect to levels of operating costs. CMHC's manuals state simply that public housing operating costs are to be "reasonably consistent with costs of any known or similar projects under CMHC administration". Provinces and territories have been required to provide CMHC with an adequate explanation where expenditures increase by more than fifteen per cent from one year to the next. In 1987, CMHC began requesting explanations where expenditures increased by over five per cent.

In addition to these general guidelines, there are specific stipulations with respect to expenditures on administration and on modernization and improvements. To limit excessive administrative overhead, administrative expenses have been limited to six per cent of total operating costs for the portfolio. Guidelines also place limits on the amount of expenditures which may be made on modernization and improvements without obtaining the approval of CMHC. Prior to mid-1989, the review thresholds for modernization and improvement expenditures were $100,000 per project or $1,000 per unit. In July 1989, this review limit was increased to $250,000 per project and $10,000 per unit with the exception of projects which are less than five years old, where the $1,000 per unit limit was retained. In cases where the estimated costs of proposed M&I work exceeds these guidelines, CMHC concurrence is to be obtained prior to its inclusion in the budget. In reviewing M&I proposals, CMHC staff establish whether the proposed work is required and assess whether the approach and the cost estimate are reasonable.

Flexibility Provisions

A certain amount of flexibility has also been built into the budget process, based on the premise that Provincial and Territorial Housing Authorities are more knowledgeable about the day-to-day requirements of projects in their jurisdiction than CMHC and that they have as much interest as CMHC does in controlling expenditures. Accordingly, funds may be transferred between various expenditure categories provided that the total approved budget is not exceeded. Similarly, funds may be transferred between individual projects financed under the same section of the National Housing Act, again provided that the total approved budget for all projects is not exceeded.

Claims Settlement and Cost-Sharing of Operating Losses

Operating losses for public housing projects are subject to cost-sharing agreements between CMHC, provinces and territories and, in some cases, municipalities. Operating losses are calculated by subtracting revenues from eligible expenditures. Once a certified budget has been received and approved by CMHC, interim claims may be made on a monthly or quarterly basis, based on unaudited cost statements. When making a final subsidy claim, provinces and territories are required to submit audited statements of expenditures, revenues and operating losses for each project. As part of the claims process, CMHC checks project eligibility and adjusts claims where unacceptable items are present (i.e unaccepted M&I proposals, excessive administration fees, and revenue variances due to the difference between the federal and provincial rent scales). Where ineligible expenditures are detected, CMHC may adjust the subsidy.

Cost-sharing ratios differ according to the section of the National Housing Act under which the projects were financed. Operating losses for projects financed under Section 79 are shared on a 75/25 per cent basis by federal and provincial/territorial governments, respectively. Losses incurred by projects financed under Section 82 are shared equally by federal and provincial/territorial governments.

In some cases, a portion of the provincial or territorial share of operating losses has been passed on to municipal governments. Under Section 79, six provinces and territories did not require that municipalities participate in the program: Newfoundland, New Brunswick, Prince Edward Island[1], Ontario, British Columbia and the Northwest Territories. In Nova Scotia, the municipal share varies between 10 per cent and 12.5 per cent. Only one project was committed in Quebec (in Montreal) and the City pays the full 25 per cent. Municipal shares in Manitoba, Saskatchewan and Alberta were 12.5 per cent, 5 per cent and 10 per cent, respectively. Whitehorse is the only municipality in the Yukon to share in the costs of operating public housing projects (12.5 per cent).

Under Section 81/82, municipalities were not required by provinces and territories to make financial contributions, except in Nova Scotia and Quebec. In Nova Scotia, the magnitude of municipal contributions ranges from 10 per cent to 25 per cent. In Quebec, municipalities contribute 10 per cent.

C. Operating Expenditures in 1986

Prior to examining temporal and cross-sectional trends in operating expenses, information pertaining to the most recent year for which expense data are available and computerized (1986) is presented.

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[1] Four projects committed in P.E.I. during the late 1960's and early 1970's required a 12.5 per cent municipal contribution.

Table 15.1 presents information pertaining to 1986 expenditures, revenues and operating losses for those projects represented within the Administrative Expense Data Base. It is important to note that, as financial data were not available for projects in Newfoundland and the Northwest Territories for 1986, the absolute magnitude of expenses, revenues and losses (and associated federal, provincial/territorial and municipal subsidy shares) for this year are underestimated. It is also important to note here that the information collected represents "actual" costs as opposed to "adjusted" costs. For example, CMHC accepts administrative costs up to a maximum of 6 per cent of total operating costs for the portfolio. Where administrative costs were adjusted to meet this criterion, "actual" rather than "adjusted" costs were recorded in the data base.

Expenditures averaged $5,545 per unit in 1986. With revenues of approximately $2,450 per unit recovering just under one-half (44.2 per cent) of total expenditures, an average operating loss of $3,098 per unit was recorded. Approximately 54.8 per cent of operating losses for the combined Section 79 and Section 81/82 portfolios are covered by federal subsidies, with the remainder being contributed by provincial/territorial and municipal governments (42.1 per cent and 3.1 per cent, respectively). The annual federal subsidy for each unit of public housing supported by the program was therefore $1,698 in 1986.

TABLE 15.1
EXPENDITURES, REVENUES AND OPERATING LOSSES, 1986

BUDGET CATEGORIES	TOTAL $ (MILLIONS)	AVERAGE $ PER UNIT	SAMPLE SIZE (n)
Expenditures	1,073.4	5,545	(4,136)
Revenues	474.2	2,450	(4,131)
Operating Losses	599.6	3,098	(4,136)
Subsidies			
Federal	328.8	1,698	(4,136)
Provincial/Territorial	252.3	1,303	(4,136)
Municipal	18.5	96	(4,136)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Operating data for Newfoundland and Northwest Territories not included. Expenditures budgeted for 1987 totalled $1.29 billion ($6,281 per unit). Based on these approved budgets, operating losses for 1987 are estimated to be $3,765 per unit of which $2,131 per unit would be the CMHC share (Program Portfolio Management Division, CMHC, 1988).

Table 15.2 illustrates the distribution of expenditures across the seven budget categories. The largest single component by far is amortization expenses, which accounted for over one-third (37.2 per cent) of total expenditures in 1986. Municipal taxes account for a further 14.0 per cent of total expenditures. Together, amortization and taxes comprised over one-half (51.2 per cent) of the total expenditures on the public housing portfolio in 1986.

TABLE 15.2
OPERATING EXPENDITURES 1986

BUDGET CATEGORIES	EXPENDITURES (MILLIONS$)	PER CENT OF TOTAL	AVERAGE PER UNIT ($)	SAMPLE SIZE (n)
Taxes	150.7	14.0	780	(4,078)
Utilities	139.2	13.0	721	(4,084)
Operating	154.2	14.4	794	(4,131)
Maintenance	78.8	7.3	409	(4,133)
M&I	88.7	8.3	458	(4,136)
Amortization	399.9	37.2	2,078	(4,081)
Administration	61.9	5.8	321	(4,128)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Operating data for Newfoundland and Northwest Territories not included.
Program costs presented in this chapter are based upon actual expenses allocated to CMHC's categories of administration as defined in the 1981 disentanglement/simplification document.

After amortization and taxes, the remaining expenditures are allocated among operating expenses (14.4 per cent), utilities (13.0 per cent), maintenance (7.3 per cent), modernization and improvement (8.3 per cent) and administrative costs (5.8 per cent).

As was illustrated in Figure 1, operating expenses cover a wide range of items, extending from expenditures on janitorial services, groundskeeping and waste removal to expenditures on insurance, grants to tenant associations and interest charged on negative cash flows. Utilities cover the cost of electricity, gas, oil and water. Maintenance expenditures cover routine activities such as repairs and painting. Modernization and improvement expenditures cover replacements (replacement of items which have a shorter life span than the building structure), modernization (the installation of more modern items or systems), and improvements (structural changes which increase the value of the real estate by increasing either the present value or by extending the economic life). Administrative expenses cover the costs incurred by local housing authorities and provincial and territorial housing corporations in managing the portfolio.

D. Trends in Operating Expenditures: 1979 - 1986

Table 15.3 illustrates changes in the cost per unit of operating the public housing portfolio between 1979 and 1986. Costs are also reported in constant 1986 dollars, adjusted for inflation using the housing component of the Consumer Price Index (see Appendix I).

The data indicate that expenses per unit declined in real terms between 1979 and 1983, increased between 1983 and 1985, and declined marginally once again between 1985 and 1986. After accounting for inflation, the average per unit cost of operating public housing projects in 1986 was 2.5 per cent lower than that recorded in 1979.

TABLE 15.3
OPERATING EXPENDITURES 1979-1986
PER UNIT

			CONSTANT 1986 DOLLARS		
YEAR	**AVERAGE PER UNIT**	**PER CENT CHANGE**	**AVERAGE PER UNIT**	**PER CENT CHANGE**	**SAMPLE SIZE (n)**
1979	3,520	-	5,685	-	(3,407)
1980	3,789	+7.6	5,658	-0.5	(3,690)
1981	4,229	+11.6	5,620	-0.7	(3,928)
1982	4,655	+10.1	5,498	-2.2	(4,173)
1983	4,866	+4.5	5,380	-2.1	(4,339)
1984	5,239	+7.7	5,584	+3.8	(4,484)
1985	5,428	+3.6	5,592	+0.1	(4,493)
1986	5,545	+2.2	5,545	-0.8	(4,136)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Project level operating data for Newfoundland and the Northwest Territories not included for 1986.

Table 15.4 illustrates trends in per unit expenses, revenues and operating losses per unit over the 1979-86 period. The data reveal that real operating losses per unit declined over the course of the 1979-86 period. After accounting for inflation, operating losses per unit were 14.5 per cent lower in 1986 than they were in 1979. This decline in operating losses is principally the result of a marked increase in real revenues per

TABLE 15.4
EXPENDITURES, REVENUES AND OPERATING LOSSES PER UNIT, 1979-1986
CONSTANT 1986 $

	EXPENDITURES		REVENUES		OPERATING LOSSES		
YEAR	AVERAGE PER UNIT	PER CENT CHANGE	AVERAGE PER UNIT	PER CENT CHANGE	AVERAGE PER UNIT	PER CENT CHANGE	SAMPLE SIZE (n)
1979	5,685	-	2,076	-	3,623	-	(3,407)
1980	5,658	-0.5	2,060	-0.8	3,631	+0.2	(3,690)
1981	5,620	-0.7	2,080	+1.0	3,567	-1.8	(3,928)
1982	5,498	-2.2	2,103	+1.1	3,419	-4.1	(4,173)
1983	5,380	-2.1	2,119	+0.8	3,265	-4.5	(4,339)
1984	5,584	+3.8	2,264	+6.8	3,322	+1.7	(4,484)
1985	5,592	+0.1	2,344	+3.5	3,252	-2.1	(4,493)
1986	5,545	-0.8	2,450	+4.5	3,098	-4.7	(4,136)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Project level operating data for Newfoundland and the Northwest Territories not included for 1986.

unit (19.0 per cent), as well as a 2.5 per cent reduction in operating expenditures per unit. With revenues increasing at a faster pace than expenditures, the rate of cost recovery has steadily increased over the course of the 1979-86 period (Table 15.5).

TABLE 15.5
RATIO OF REVENUES TO EXPENDITURES, 1979-1986

	1979	1980	1981	1982	1983	1984	1985	1986
Ratio of revenues to expenditures	38.8	39.7	40.2	41.9	44.5	45.9	47.3	48.6
Sample Size (n)	3,396	3,679	3,924	4,164	4,337	4,482	4,487	4,131

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Project level operating data for Newfoundland and the Northwest Territories not included for 1986.

Table 15.6 illustrates trends in average expenditures per unit on different components of project budgets between 1979 and 1986 (measured in constant 1986$). This allows for the identification of changes in the way project budgets have been allocated over the course of this seven year period.

Strictly comparing expenditures in 1986 to those recorded for 1979 yields the following observations. Average expenditures per unit declined in six of the seven budget categories: operating (-20.0 per cent), amortization (-16.0 per cent), maintenance (-11.9 per cent), administration (-5.3 per cent) taxes (-4.6 per cent) and utilities (-1.5 per cent). Modernization and improvements was the only budget category which recorded increased expenditures per unit in real terms (+153.0 per cent).

TABLE 15.6
OPERATING EXPENDITURES PER UNIT, 1979-1986
CONSTANT 1986 $

BUDGET CATEGORIES	1979	1980	1981	1982	1983	1984	1985	1986
Taxes	818	795	775	763	725	751	756	780
Utilities	732	762	800	801	790	826	799	721
Operating	993	980	950	923	676	717	746	794
Maintenance	464	537	348	404	375	402	418	409
M&I	181	131	391	249	287	339	396	458
Amortization	2,474	2,451	2,358	2,251	2,282	2,310	2,205	2,078
Administration	339	339	342	345	309	310	319	321

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Project level operating data for Newfoundland and the Northwest Territories not included for 1986.

E. Variation in Operating Expenditures

Having reviewed temporal trends in operating expenditures over the 1979-1986 period, this section examines the variation in operating costs across different components of the portfolio. Average annual operating costs are compared in order to determine which components of the portfolio are more expensive to operate. In order to avoid the influence of unusually high expenditures in any given year, costs have been averaged over the eight year period spanning 1979-86. Expenditures for the years 1979-85 were first inflated to 1986 values, using the housing component of the Consumer Price Index (see Appendix I). Subsequent to this, an average of the annual expenditures recorded between 1979 and 1986 was calculated. This average is reported in 1986 dollars. In order to control for the influence of project size, all expenditures have been converted to expenditures per unit.

Total Operating Expenditures

A comparison of public housing operating costs among provinces and territories reveals that average expenditures per unit were highest in Northwest Territories ($16,168), followed by Yukon ($8,949), Newfoundland ($6,763) and Alberta ($6,452) (Table 15.7). Average expenditures per unit were lowest in Manitoba ($4,930), Saskatchewan ($4,977), Nova Scotia ($5,228) and Quebec ($5,293). Average expenditures in the remaining provinces and territories ranged from $5,349 to $5,885 per unit.

When other project characteristics are examined, it is apparent that projects housing families were more costly to operate ($6,448 per unit) than those housing seniors ($4,822 per unit). With respect to project age, the newest projects (constructed between 1980 and 1987) recorded the highest expenditures per unit ($7,544). Among building types, projects consisting of detached, semi-detached or row structures were the most costly to operate (at $6,492 per unit), while low-rise and high-rise apartment projects were the least costly ($5,079). Average expenditures per unit were highest for projects with fewer than ten units ($8,593) and decline as project size increases. Among settlement size categories, rural projects were the most costly to operate ($6,330 per unit), followed by those located in cities with populations of 500,000 or more ($5,791 per unit).

Operating expenditure data for individual budget components are presented in Tables 15.8 through 15.15.

Amortization

Average annual amortization expenditures per unit for the 1979-86 period are presented in Table 15.8. Amortization expenditures constitute the largest component of project budgets and thus exert the dominant influence on total operating expenditures. Nationally, an average of $2,324 per unit was spent on amortization annually between 1979-86. Amortization costs are subject to considerable variation across the portfolio.

TABLE 15.7
AVERAGE ANNUAL TOTAL EXPENDITURES PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	5,378	(1,317)
Section 81/82	5,608	(3,337)
PROVINCE/TERRITORY		
Newfoundland	6,763	(149)
Prince Edward Island	5,852	(85)
Nova Scotia	5,228	(465)
New Brunswick	5,885	(154)
Quebec	5,293	(617)
Ontario	5,481	(1,328)
Manitoba	4,930	(333)
Saskatchewan	4,977	(568)
Alberta	6,452	(531)
British Columbia	5,349	(100)
Yukon	8,949	(22)
Northwest Territories	16,168	(302)
CLIENT		
Family	6,448	(2,196)
Senior	4,822	(2,253)
Family & Senior	5,185	(191)
PROJECT AGE		
Pre-1964	5,311	(86)
1964-1969	5,875	(368)
1970-1974	4,905	(1,325)
1975-1979	5,768	(1,781)
1980-1987	7,544	(1,094)
BUILDING TYPE		
Detached, Semi & Row	6,492	(2,184)
Low rise	5,079	(1,525)
High rise	5,079	(514)
Mixed (no high rise)	5,721	(114)
Mixed (with high rise)	6,042	(63)
PROJECT SIZE (UNITS)		
Less than 10	8,593	(868)
10 - 49	5,678	(2,704)
50 - 99	5,569	(546)
100 - 199	5,417	(365)
200 or more	5,384	(171)
SETTLEMENT SIZE		
Rural	6,330	(1,317)
2,500 - 9,999	5,532	(1,072)
10,000 - 29,999	5,422	(617)
30,000 - 99,999	5,151	(566)
100,000 - 499,999	5,440	(507)
500,000 or more	5,791	(575)
ALL	5,567	(4,654)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

TABLE 15.8
AVERAGE ANNUAL OPERATING EXPENDITURES ON AMORTIZATION PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	2,491	(1,247)
Section 81/82	2,288	(3,332)
PROVINCE/TERRITORY		
Newfoundland	3,989	(149)
Prince Edward Island	3,543	(79)
Nova Scotia	2,609	(446)
New Brunswick	1,914	(154)
Quebec	2,412	(617)
Ontario	1,684	(1,328)
Manitoba	2,255	(331)
Saskatchewan	3,491	(538)
Alberta	4,405	(531)
British Columbia	2,201	(98)
Yukon	3,276	(21)
Northwest Territories	7,492	(287)
CLIENT		
Family	2,233	(2,157)
Senior	2,445	(2,223)
Family & Senior	2,076	(190)
PROJECT AGE		
Pre-1964	767	(86)
1964-1969	1,220	(367)
1970-1974	1,528	(1,320)
1975-1979	3,114	(1,778)
1980-1987	5,725	(1,028)
BUILDING TYPE		
Detached, Semi & Row	2,881	(2,140)
Low rise	2,457	(1,501)
High rise	2,204	(514)
Mixed (no high rise)	1,777	(114)
Mixed (with high rise)	1,634	(63)
PROJECT SIZE (UNITS)		
Less than 10	4,893	(833)
10 - 49	2,832	(2,668)
50 - 99	2,533	(543)
100 - 199	2,256	(364)
200 or more	1,546	(171)
SETTLEMENT SIZE		
Rural	3,314	(1,288)
2,500 - 9,999	2,804	(1,053)
10,000 - 29,999	2,639	(609)
30,000 - 99,999	2,218	(560)
100,000 - 499,999	1,834	(507)
500,000 or more	2,323	(575)
ALL	2,324	(4,579)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

Amortization expenditures decline with project age from an average of $5,725 for projects completed between 1980-87 to a low of $767 per unit for projects completed prior to 1964. Amortization expenditures also decline with project size, from an average of $4,893 per unit for projects with less than 10 units to $1,546 for projects with in excess of 200 units. Among building types, projects comprised of detached, semi-detached, and row structures exhibited the highest average amortization expenditures per unit ($2,881). Among settlement sizes, amortization expenditures were highest in rural areas ($3,314) and lowest in cities with populations between 100,000 and 499,999 ($1,834).

A comparison among provinces and territories reveals that expenditures per unit are highest in the Northwest Territories ($7,492), approximately 3.2 times the national average. Other provinces and territories with substantially above average amortization costs per unit include Alberta ($4,405), Newfoundland ($3,989), Prince Edward Island ($3,543), Saskatchewan ($3,491), and the Yukon ($3,276).

There are several reasons for variations in amortization expenditures. Amortization expenditures are influenced by the initial capital cost of each unit as well as the interest rate prevailing when the mortgage agreement was initiated. Both of these factors are sensitive to the time period in which the projects were completed. For example, the high amortization expenditures per unit in the Northwest Territories reflect the higher cost of construction materials and labour in less accessible northern communities. Similarly, the fact that the public housing stock completed between 1980 and 1987 has the highest amortization costs per unit is partially a reflection of the high interest rates which have prevailed during the 1980's.

The period of construction appears to account for a large measure of the provincial and territorial variations in amortization costs per unit noted earlier. Nationally, public housing units completed between 1980 and 1987 comprise 13.3 per cent of the total portfolio. However, the five provinces and territories with the highest amortization costs per unit also have the highest proportions of their respective public housing portfolios completed between 1980 and 1987: the Northwest Territories (52.1 per cent), Prince Edward Island (44.4 per cent), Alberta (38.9 per cent), Saskatchewan (38.9 per cent) and Newfoundland (29.3 per cent).

As individual mortgages reach the end of their amortization period and are paid in full, the proportion of total operating expenditures for the portfolio accounted for by amortization will begin to decline. The majority of amortization terms were set at 50 years in duration. Consequently, very few mortgages will be paid in full within the next ten years. The impact of mortgage termination will not begin to be felt with any magnitude until the 2010-2019 period, when 9 per cent of mortgages will reach the end of their term (Table 15.9). The majority of mortgages will be paid in full by the end of the following decade (in 2029).

TABLE 15.9
MORTGAGE TERMINATION

	SECTION 40		SECTION 43/44		ALL PROJECTS	
TIME PERIOD	NUMBER	PER CENT	NUMBER	PER CENT	NUMBER	PER CENT
1989	5	0.3	-	-	5	0.1
1990-1999	8	0.6	9	0.3	17	0.4
2000-2009	79	5.4	12	0.4	91	2.1
2010-2019	112	7.8	279	9.6	391	9.0
2020-2029	519	36.0	2,394	82.2	2,913	66.9
2030-2039	720	49.9	219	7.5	939	21.2
1989-2039	1,443	100.0	2,913	100.0	4,356	100.0

SOURCE: Administrative Data Files, Asset and Program Accounting Division, CMHC, 1988.
NOTE: Not included in these figures are projects which received provincial financing.

Taxes

After amortization, municipal taxes constitute the second largest component of operating expenditures. Average annual expenditures on taxes per unit for the 1979-86 period are reported in Table 15.10. Nationally, expenditures on taxes averaged $760 per unit annually between 1979 and 1986.

Average taxes per unit were 34 per cent higher for Section 79 projects than those financed under Section 81/82. Taxes per unit were highest for family projects ($946), projects constructed between 1964-1969 ($965) and for projects with a mixture of building types ($837 and $976). Annual per unit expenditures on taxes also increase with both project and settlement size.

Average annual expenditures on taxes per unit were highest in Quebec ($866), Ontario ($853) and Manitoba ($826). The remaining provinces and territories recorded below average expenditures on municipal taxes. One of the key factors in accounting for variation in taxes is settlement size where higher levels of municipal services provided in larger urban centers result in higher taxes.

TABLE 15.10
AVERAGE ANNUAL EXPENDITURES ON TAXES PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	595	(1,267)
Section 81/82	796	(3,325)
PROVINCE/TERRITORY		
Newfoundland	385	(149)
Prince Edward Island	356	(84)
Nova Scotia	463	(443)
New Brunswick	669	(154)
Quebec	866	(617)
Ontario	853	(1,327)
Manitoba	826	(331)
Saskatchewan	573	(563)
Alberta	482	(531)
British Columbia	497	(100)
Yukon	578	(22)
Northwest Territories	343	(270)
CLIENT		
Family	946	(2,158)
Senior	591	(2,234)
Family & Senior	767	(191)
PROJECT AGE		
Pre-1964	787	(86)
1964-1969	965	(367)
1970-1974	800	(1,320)
1975-1979	645	(1,775)
1980-1987	666	(1,044)
BUILDING TYPE		
Detached, Semi & Row	792	(2,142)
Low rise	573	(1,509)
High rise	769	(514)
Mixed (no high rise)	837	(114)
Mixed (with high rise)	976	(63)
PROJECT SIZE (UNITS)		
Less than 10	580	(831)
10 - 49	607	(2,681)
50 - 99	773	(544)
100 - 199	794	(365)
200 or more	889	(171)
SETTLEMENT SIZE		
Rural	460	(1,278)
2,500 - 9,999	567	(1,057)
10,000 - 29,999	662	(614)
30,000 - 99,999	680	(565)
100,000 - 499,999	867	(503)
500,000 or more	891	(575)
ALL	760	(4,592)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

Administration

Data pertaining to expenditures on administration are reported in Table 15.11. Administrative expenses cover the costs incurred by local housing authorities and provincial and territorial housing corporations in managing the portfolio. While CMHC accepts administrative costs up to a maximum of 6 per cent of total operating costs for the portfolio for cost-sharing, the data presented here represent "actual" rather than "adjusted" costs. Administration costs per unit averaged $327 over the 1979-86 period and were highest in the Northwest Territories ($830) followed by Newfoundland ($535) and the Yukon ($522). Average annual expenditures on administration varied considerably depending on the nature of the clients served. Average expenditures per unit for family projects ($366) were 25.7 per cent higher than those recorded for seniors projects.

Among project age groups, the highest average annual expenditures per unit on administration were recorded for projects completed between 1964-1969 ($352); the lowest were recorded among projects completed prior to 1964 ($303). Projects containing a mixture of building types had the highest per unit expenditures on administration. Administrative costs per unit were also higher than average among projects with less than 10 units. Among settlement sizes, the highest expenditures were recorded among projects located in rural areas.

Average per unit expenditures on administration are higher where administration of a project is more complex or where labour and travel costs are higher. Administrative complexity can be found in family environments and complex project types. Higher travel costs may be incurred where the portfolio administered is highly dispersed in rural or remote locations. Higher labour costs could be linked to larger urban areas or to the isolation of remote areas.

TABLE 15.11
AVERAGE ANNUAL EXPENDITURES ON ADMINISTRATION PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	306	(1,312)
Section 81/82	332	(3,334)
PROVINCE/TERRITORY		
Newfoundland	535	(149)
Prince Edward Island	416	(85)
Nova Scotia	332	(463)
New Brunswick	345	(154)
Quebec	391	(617)
Ontario	308	(1,327)
Manitoba	284	(331)
Saskatchewan	239	(538)
Alberta	287	(531)
British Columbia	328	(100)
Yukon	522	(22)
Northwest Territories	830	(301)
CLIENT		
Family	366	(2,193)
Senior	291	(2,249)
Family & Senior	340	(191)
PROJECT AGE		
Pre-1964	303	(86)
1964-1969	352	(368)
1970-1974	326	(1,323)
1975-1979	324	(1,780)
1980-1987	319	(1,089)
BUILDING TYPE		
Detached, Semi & Row	345	(2,180)
Low rise	324	(1,524)
High rise	297	(513)
Mixed (no high rise)	371	(114)
Mixed (with high rise)	376	(63)
PROJECT SIZE (UNITS)		
Less than 10	443	(866)
10 - 49	328	(2,701)
50 - 99	329	(544)
100 - 199	319	(365)
200 or more	324	(170)
SETTLEMENT SIZE		
Rural	367	(1,313)
2,500 - 9,999	347	(1,071)
10,000 - 29,999	334	(615)
30,000 - 99,999	303	(566)
100,000 - 499,999	309	(494)
500,000 or more	339	(574)
ALL	327	(4,646)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

Utilities

Table 15.12 provides data on average annual expenditures on utilities. Expenditures on utilities averaged $771 per unit during the 1979-86 period (measured in 1986 dollars).

Among client types, family projects reported the highest per unit expenditures on utilities ($976). Per unit expenditures for family projects were roughly 64 per cent higher than those recorded for seniors projects. This can be partially accounted for by differences in unit sizes and the number of people housed in family units versus seniors units. In addition, while a linear relationship between project age and per unit expenditures on utilities is not apparent, projects completed since 1970 do exhibit somewhat lower per unit expenditures than those completed prior to 1970. Projects consisting of detached, semi-detached or row housing were the most costly to service ($1,009 per unit), while those consisting of high-rise structures were the least expensive ($631 per unit). Projects with fewer than 10 units and those located in rural areas also recorded high per unit expenditures on utilities, $1,658 and $1,254, respectively. This may be partially explained by the fact that the majority of projects falling in these categories are comprised of detached, semi-detached or row structures.

The highest expenditures on utilities were recorded in the Northwest Territories: $6,051 per unit or approximately 7.8 times the national average. Average expenditures on utilities were also substantially higher in the Yukon ($1,808) and New Brunswick ($1,315).

Project Operations

Average annual per unit expenditures on project operations during the 1979-86 period are presented in Table 15.13. Operating expenses cover a wide range of items, extending from expenditures on janitorial services, groundskeeping and waste removal to expenditures on insurance, grants to tenant associations and interest charged on negative cash flows. Measured in 1986 dollars, an average of $839 per unit per year was spent on the operation of the public housing portfolio during the 1979-1986 period. The highest average expenditures were recorded in the Yukon ($1,283), British Columbia ($1,144) and Ontario ($1,084).

High operating expenses per unit are associated with family projects, older projects, large projects, projects containing a mixture of building types and those located in large urban areas. For example, average operating expenditures per unit for family projects were approximately 1.7 times the average for seniors projects. Projects developed prior to 1970 had average operating expenditures per unit in excess of 2.5 times those recorded for projects developed during the 1980's. Average expenditures per unit for projects with 200 units or more were almost double the average for projects with less than 10 units.

TABLE 15.12
AVERAGE ANNUAL EXPENDITURES ON UTILITIES PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	667	(1,202)
Section 81/82	793	(3,279)
PROVINCE/TERRITORY		
Newfoundland	N/A	(0)
Prince Edward Island	673	(85)
Nova Scotia	793	(459)
New Brunswick	1,315	(154)
Quebec	840	(617)
Ontario	759	(1,328)
Manitoba	600	(327)
Saskatchewan	417	(563)
Alberta	509	(528)
British Columbia	410	(980)
Yukon	1,808	(22)
Northwest Territories	6,051	(300)
CLIENT		
Family	976	(2,035)
Senior	595	(2,245)
Family & Senior	750	(189)
PROJECT AGE		
Pre-1964	844	(2,025)
1964-1969	888	(1,522)
1970-1974	753	(513)
1975-1979	739	(108)
1980-1987	759	(63)
BUILDING TYPE		
Detached, Semi & Row	1,009	(820)
Low rise	698	(2,599)
High rise	631	(537)
Mixed (no high rise)	888	(358)
Mixed (with high rise)	883	(167)
PROJECT SIZE (UNITS)		
Less than 10	1,658	(820)
10 - 49	814	(2,599)
50 - 99	723	(537)
100 - 199	720	(358)
200 or more	747	(167)
SETTLEMENT SIZE		
Rural	1,254	(1,291)
2,500 - 9,999	774	(1,016)
10,000 - 29,999	740	(587)
30,000 - 99,999	741	(505)
100,000 - 499,999	703	(507)
500,000 or more	732	(575)
ALL	771	(4,481)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Expenditures on utilities are not available on a disaggregated basis for public housing projects in Newfoundland, where they have been included within the project operations budget category.

TABLE 15.13
AVERAGE ANNUAL EXPENDITURES ON PROJECT OPERATIONS PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	692	(1,250)
Section 81/82	871	(3,111)
PROVINCE/TERRITORY		
Newfoundland	392	(149)
Prince Edward Island	326	(85)
Nova Scotia	504	(463)
New Brunswick	738	(154)
Quebec	690	(617)
Ontario	1,084	(1,328)
Manitoba	528	(331)
Saskatchewan	259	(568)
Alberta	503	(531)
British Columbia	1,144	(100)
Yukon	1,283	(22)
Northwest Territories	N/A	(17)
CLIENT		
Family	1,081	(1,920)
Senior	635	(2,241)
Family & Senior	720	(191)
PROJECT AGE		
Pre-1964	1,226	(86)
1964-1969	1,276	(365)
1970-1974	885	1,313)
1975-1979	639	(1,658)
1980-1987	463	(939)
BUILDING TYPE		
Detached, Semi & Row	737	(1,900)
Low rise	701	(1,520)
High rise	807	(514)
Mixed (no high rise)	1,083	(114)
Mixed (with high rise)	1,254	(63)
PROJECT SIZE (UNITS)		
Less than 10	567	(708)
10 - 49	629	(2,574)
50 - 99	774	(543)
100 - 199	840	(365)
200 or more	1,110	(171)
SETTLEMENT SIZE		
Rural	577	(1,055)
2,500 - 9,999	611	(1,047)
10,000 - 29,999	645	(612)
30,000 - 99,999	749	(566)
100,000 - 499,999	1,037	(507)
500,000 or more	906	(575)
ALL	839	(4,361)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Expenditures on project operations are not available on a disaggregated basis for public housing projects in the Northwest Territories, where they have been included in the maintenance budget category.

Maintenance

Average annual maintenance expenditures per unit are examined in Table 15.14. Maintenance expenditures cover routine activities such as repairs and painting. Expenditures on maintenance averaged $418 per unit annually during the 1979-86 period. Section 79 projects received roughly 1.4 times the maintenance expenditures per unit recorded for Section 81/82 projects. Family projects were markedly more costly to maintain than seniors projects, receiving approximately 2.4 times the expenditures per unit recorded for seniors projects. Maintenance expenditures per unit increase with project age, from a level of $281 per unit for projects completed between 1980-87 to $724 for projects completed prior to 1964. Projects comprised of detached, semi-detached or row structures were the most costly to maintain (at $612 per unit); high rise projects were the least costly ($280 per unit). High average annual maintenance expenditures per unit were also observed among projects with fewer than 10 units ($735), projects in rural areas ($485) and those located in the largest cities ($459).

Maintenance expenditures per unit were highest in the Northwest Territories ($1,831). This is somewhat misleading, however, as expenditures on project operations have been included in this budget category. Other provinces and territories with above average expenditures per unit are: the Yukon ($1,314), Newfoundland ($1,067), New Brunswick ($774), Prince Edward Island ($640), British Columbia ($534), and Manitoba ($525).

High maintenance expenditures, it would appear, are associated with older projects, projects demanding greater attention (i.e. family projects, complex building types) and small projects in isolated environments.

Modernization and Improvements

Table 15.15 presents data pertaining to expenditures on modernization and improvements. Modernization and improvement expenditures cover replacements (replacement of items which have a shorter life span than the building structure), modernization (the installation of more modern items or systems) and improvements (structural changes which increase the value of the real estate by increasing either the present value or by extending the economic life). Expenditures on modernization and improvements averaged $307 per unit between 1979-86.

TABLE 15.14
AVERAGE ANNUAL EXPENDITURES ON MAINTENANCE PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	550	(1,312)
Section 81/82	389	(3,335)
PROVINCE/TERRITORY		
Newfoundland	1,067	(149)
Prince Edward Island	640	(85)
Nova Scotia	488	(463)
New Brunswick	774	(154)
Quebec	290	(617)
Ontario	376	(1,328)
Manitoba	525	(331)
Saskatchewan	358	(567)
Alberta	442	(531)
British Columbia	534	(100)
Yukon	1,314	(22)
Northwest Territories	1,831*	(300)
CLIENT		
Family	599	(2,193)
Senior	246	(2,251)
Family & Senior	475	(191)
PROJECT AGE		
Pre-1964	724	(86)
1964-1969	606	(368)
1970-1974	421	(1,323)
1975-1979	331	(1,780)
1980-1987	281	(1,090)
BUILDING TYPE		
Detached, Semi & Row	612	(2,180)
Low rise	315	(1,524)
High rise	280	(514)
Mixed (no high rise)	574	(114)
Mixed (with high rise)	575	(63)
PROJECT SIZE (UNITS)		
Less than 10	735	(864)
10 - 49	442	(2,703)
50 - 99	385	(544)
100 - 199	381	(365)
200 or more	428	(171)
SETTLEMENT SIZE		
Rural	485	(1,312)
2,500 - 9,999	413	(1,071)
10,000 - 29,999	404	(616)
30,000 - 99,999	378	(566)
100,000 - 499,999	392	(507)
500,000 or more	459	(575)
ALL	418	(4,647)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: * Includes expenditures on project operations.

TABLE 15.15
AVERAGE ANNUAL EXPENDITURES ON MODERNIZATION AND IMPROVEMENTS PER UNIT (1979-1986) MEASURED IN 1986 $

PROJECT CHARACTERISTICS	AVERAGE PER UNIT ($)	SAMPLE (n)
PROGRAM		
Section 79	367	(1,317)
Section 81/82	294	(3,337)
PROVINCE/TERRITORY		
Newfoundland	412	(149)
Prince Edward Island	217	(85)
Nova Scotia	223	(465)
New Brunswick	406	(154)
Quebec	163	(617)
Ontario	423	(1,328)
Manitoba	130	(333)
Saskatchewan	224	(568)
Alberta	96	(531)
British Columbia	393	(100)
Yukon	1,074	(22)
Northwest Territories	181	(302)
CLIENT		
Family	446	(2,196)
Senior	183	(2,253)
Family & Senior	293	(191)
PROJECT AGE		
Pre-1964	718	(86)
1964-1969	605	(368)
1970-1974	321	(1,325)
1975-1979	169	(1,781)
1980-1987	78	(1,094)
BUILDING TYPE		
Detached, Semi & Row	410	(2,184)
Low rise	223	(1,525)
High rise	205	(514)
Mixed (no high rise)	481	(114)
Mixed (with high rise)	449	(63)
PROJECT SIZE (UNITS)		
Less than 10	255	(868)
10 - 49	276	(2,704)
50 - 99	257	(546)
100 - 199	297	(365)
200 or more	385	(171)
SETTLEMENT SIZE		
Rural	230	(1,317)
2,500 - 9,999	275	(1,072)
10,000 - 29,999	266	(617)
30,000 - 99,999	310	(566)
100,000 - 499,999	381	(507)
500,000 or more	274	(575)
ALL	307	(4,654)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

As was the case with maintenance expenditures, modernization and improvement expenditures were also higher for Section 79 projects than Section 81/82 projects (+25 per cent). Expenditures were markedly higher for family projects than seniors projects (+244 per cent). Modernization and improvements increase dramatically with project age, rising from $78 per unit for projects completed between 1980-87 to $718 per unit for projects completed prior to 1964. Among building types, modernization and improvement expenditures per unit were highest for mixed projects ($481 and $449). Projects with 200 or more units also exhibited above average modernization and improvement expenditures per unit.

Modernization and improvement expenditures per unit were highest in the Yukon ($1,074), followed by Ontario ($423), Newfoundland ($412) and New Brunswick ($406).

F. Factors Contributing to High Operating Expenditures

Having compared average operating expenditures for different components of the public housing portfolio it is important to isolate those factors which make the greatest contribution to variations in the operating costs.

Prior to examining some of the underlying influences on operating costs, it is worth noting that aggregate operating expenditures do not vary significantly between the two programs (Section 79 and Section 81/82). Section 81/82 projects recorded only marginally higher operating expenditures per unit (roughly 4 per cent) than Section 79 projects. When operating expenditures are disaggregated, however, some differences can be detected. For example, expenditures on municipal taxes, project operations and utilities were considerably higher for Section 81/82 projects than for Section 79 projects (approximately 34 per cent, 26 per cent and 19 per cent higher, respectively). Higher expenditures on taxes, utilities, project operations and administration were partially offset by lower expenditures on maintenance (-29 per cent), modernization and improvements (-20 per cent) and amortization (-8 per cent).

A comparison of operating expenditures by province and territory clearly indicates that northern projects are the most costly to operate. Total annual expenditures per unit in the Northwest Territories and the Yukon were 2.9 and 1.6 times the national average, respectively. Per unit expenditures for public housing projects in the Northwest Territories and the Yukon were higher than the national average in every budget category except taxes, administration (in the Yukon) and modernization and improvement (in the Northwest Territories). After the Northwest Territories and the Yukon, Newfoundland and Alberta record the next highest average operating expenditures per unit. In these cases, the influence of high amortization expenditures (the third and second highest in the country, respectively) are largely responsible.

A variety of factors contribute to provincial and territorial variations in operating expenditures per unit. Differences in accessibility influence the costs of key inputs to both the construction and operation of the portfolio, whether they be construction materials, labour, or fuel, electricity and water. The impact of differences in input prices is pervasive and is reflected in terms of variations in expenditures on amortization (due to varying initial capital costs), utilities, project operations, maintenance, modernization and improvements, and administration. Municipal taxes may be the only budget category which is not directly influenced by variations in input prices.

Geographical factors are also important. Differences in climate affect the consumption of fuel and electricity to heat and operate public housing projects. For example, utility costs per unit in the Northwest Territories and the Yukon were 7.8 and 2.3 times the national average, respectively. Climatic variations also influence the rate at which structures deteriorate, whether due to moisture problems or frost heave, and accordingly influence the cost of maintaining the portfolio.

As discussed in previous chapters, the approach to portfolio management also differs by province and territory, affecting the manner in which responsibilities for the operation of the portfolio are allocated, the nature of guidance and support provided to decentralized management groups (e.g. local housing authorities) as well as the degree to which the operations of local housing authorities are monitored and, where required, directed by provincial and territorial housing agencies. Provincial and territorial policies may also indirectly influence trends in operating expenditures. For example, an emphasis on housing seniors as opposed to families may result in lower overall operating costs per unit in provincial or territorial portfolios.

In addition to the influence exerted by differences in the cost of key inputs (e.g. materials, labour, utilities) and approaches to portfolio management, provincial and territorial variations in operating expenditures are also strongly influenced by underlying differences in the characteristics of their respective public housing portfolios. For example, the high operating expenditures per unit recorded for public housing in the Northwest Territories (roughly three times the national average) are strongly influenced by the fact that over one-half of the portfolio was completed between 1980 and 1986 (a period of high interest rates). Furthermore, 94 per cent of the units in the Northwest Territories' portfolio of public housing are contained in detached, semi-detached and row structures, which are more costly to construct and operate than the apartment projects more common in other parts of the country. Compounding this is the fact that 89.5 per cent of the stock consists of family projects, which are more costly to operate than those which house seniors. The impact of portfolio characteristics on levels of operating expenditures is discussed in greater detail below.

The nature of the clients served appears to influence the cost of operating public housing projects. Family projects are more costly to operate than seniors projects. Total operating expenditures per unit were 34 per cent higher for family projects than for seniors projects. Family projects recorded higher expenditures per unit than seniors projects in every budget category except amortization. These differences were most marked in the case of maintenance (+143 per cent) and modernization and improvements (+144 per cent), but were also considerable for the remaining budget categories: operations (+70 per cent), municipal taxes (+60 per cent), utilities (+64 per cent) and administration (+26 per cent). Lower amortization expenditures per unit (-9 per cent) were not sufficient to offset the higher costs in these other areas. Part of the difference in operating costs per unit between family and senior projects is likely due to the difference in unit sizes. Operating expenditures per unit for projects which house both families and seniors generally fall between those observed for family projects or seniors projects independently. The exception to this trend is expenditures on amortization which are lower for mixed projects than for either family or seniors projects.

The cost of operating public housing projects also varies according to the age of the project. In terms of total expenditures, the newest projects are the most expensive to operate. This is due to the higher amortization costs incurred among this component of the portfolio. Amortization expenditures per unit for projects completed between 1980 and 1987 are approximately 6.5 times as great as those recorded for projects completed prior to 1964.

Outside of amortization costs, per unit expenditures in most other budget categories increase with the age of the project. For example, per unit expenditures on maintenance were 2.6 times as great for projects completed prior to 1964, than they were for projects completed between 1980-1987. The influence of project age on operating costs is even more pronounced in the case of modernization and improvements. Per unit expenditures on modernization and improvements were approximately 9.2 times as great for projects completed prior to 1964 than those recorded for projects completed between 1980-1987. Projects developed prior to 1970 had average per unit expenditures on project operations in excess of 2.5 times those recorded for projects developed during the 1980's. Expenditures in the remaining budget categories (taxes, utilities, and administration) do not appear to be markedly affected by project age.

Among building types, the highest expenditures per unit are exhibited by projects consisting of detached, semi-detached, and row structures. Apartment projects are less costly to operate in every budget category with the exception of taxes and project operations (in the case of high rise projects) and amortization (in the case of low rise projects). Projects comprised of a mixture of building types recorded slightly higher than average expenditures per unit (+3 per cent for those with no high rises and +9 per cent for those which have a high rise component).

Per unit expenditures in most budget categories decline with increasing project size. For example, per unit expenditures on amortization for the smallest projects (under 10 units) were 2.1 times the portfolio average and 3.2 times as great as those recorded among projects with 200 or more units. Per unit expenditures on utilities among projects with fewer than 10 units were 2.2 times as great as the portfolio average. This is likely a reflection of differences in the types of buildings which comprise projects of different sizes (i.e. more apartment structures in larger projects). Per unit expenditures on maintenance for projects with under 10 units were 76 per cent higher than the portfolio average. Expenditures for administration of this component of the stock were 35 per cent higher than the portfolio average. In contrast, expenditures on project operations and taxes both increase with project size.

As was the case with projects consisting of detached, semi-detached and row units and those with under 10 units, public housing projects located in rural areas also manifested higher than average operating expenditures per unit. In each of these components of the portfolio, per unit expenditures on amortization, utilities and maintenance were the highest recorded in the country among their respective categories. The commonality among the factors contributing to high overall expenditures among these projects is not surprising, given the considerable similarities among the projects themselves. In fact, 83.1 per cent of all projects with under 10 units and 53.5 per cent of all projects in rural areas are comprised of detached, semi-detached and row structures.

G. Revenues, Expenditures and Operating Losses

Having examined trends in the cost of operating the public housing portfolio, it is appropriate to turn now to the examination of operating losses, as it is this component of project budgets which is directly subsidized by governments. Table 15.16 presents information concerning variation in average revenues, revenue and expense ratios and average operating losses across different components of the public housing portfolio.

Average revenues per unit and the ratio of revenues to expenses is higher for Section 79 projects than Section 81/82 projects, contributing to slightly lower operating losses per unit for the Section 79 portfolio. Northwest Territories, Yukon, Newfoundland and Alberta are the provinces and territories with the highest operating losses per unit. This is not surprising insofar as these provinces and territories recorded the highest average expenditures per unit. In the case of the Northwest Territories and Newfoundland, the impact of high expenditures was compounded by low revenues (the two lowest revenues per unit in the country). While Yukon recorded revenues per unit which were higher than the national average (second highest in the country) this was not sufficient to offset the high average expenditures per unit. The Northwest Territories and Newfoundland recorded ratios of revenues to expenses which were well below the national average.

Family projects and mixed family/senior projects recorded higher than average revenues per unit than seniors projects. In the case of family projects, however, as is reflected in the lower revenue/expense ratio and higher average operating losses per unit, this was insufficient to offset higher levels of expenditures. With respect to project age, newer projects generally raised lower average revenues per unit, recorded lower revenue/expense ratios and had higher average operating losses per unit than were recorded by older projects.

Projects consisting of detached, semi-detached and row structures had above average revenues per unit, but also recorded the lowest revenue/expense ratio and the highest average operating losses per unit. Mixed projects with a high-rise component manifest similar trends and had the second highest average operating losses per unit. In contrast, high-rise and low-rise apartment structures recorded the lowest revenues per unit but had above average revenue/expense ratios and the lowest operating losses per unit among building types.

A fairly consistent trend was observed between operating losses and project size. Generally speaking, the smaller the project, the lower ratio of revenues to expenses and, accordingly, the higher the average operating loss per unit. Operating losses were particularly high for projects with fewer than 10 units. With respect to settlement size, projects located in rural areas recorded the lowest average revenues per unit and revenue/expense ratios, along with the highest average operating losses per unit. Projects located in the largest cities (with 500,000 or more people) recorded the second highest average operating losses per unit, despite collecting the second highest revenues per unit.

TABLE 15.16
AVERAGE ANNUAL REVENUE AND OPERATING LOSSES PER UNIT (1979-86) MEASURED IN 1986 $

CHARACTERISTICS	AVERAGE REVENUE PER UNIT	REVENUE/ EXPENDITURES RATIO	AVERAGE PROJECT OPERATING LOSS PER UNIT	SAMPLE SIZE (n)
PROGRAM				
Section 79	2,259	47.3	3,183	(1,317)
Section 81/82	2,174	41.6	3,435	(3,337)
PROVINCE/TERRITORY				
Newfoundland	1,668	27.4	5,098	(149)
Prince Edward Island	2,074	38.9	3,806	(85)
Nova Scotia	2,070	42.0	3,166	(465)
New Brunswick	2,039	35.7	3,845	(154)
Quebec	2,056	40.5	3,238	(617)
Ontario	2,188	41.9	3,293	(1,328)
Manitoba	2,272	49.7	2,659	(333)
Saskatchewan	1,929	45.4	3,088	(568)
Alberta	2,276	39.4	4,176	(531)
British Columbia	3,391	67.6	2,174	(100)
Yukon	3,140	36.4	5,808	(22)
Northwest Territories	1,549	11.9	14,620	(302)
CLIENT				
Family	2,341	39.1	4,113	(2,196)
Senior	2,027	45.0	2,804	(2,253)
Family & Senior	2,365	47.9	2,883	(191)
PROJECT AGE				
Pre-1964	2,391	47.8	2,990	(86)
1964-1969	2,399	43.0	3,493	(368)
1970-1974	2,161	46.6	2,754	(1,325)
1975-1979	2,138	39.6	3,633	(1,781)
1980-1987	2,078	32.0	5,485	(1,094)
BUILDING TYPE				
Detached, Semi & Row	2,303	40.7	4,203	(2,184)
Low rise	2,050	43.1	3,038	(1,525)
High rise	2,091	43.8	2,994	(514)
Mixed (no high rise)	2,476	45.1	3,313	(114)
Mixed (with high rise)	2,346	40.7	3,710	(63)
PROJECT SIZE (UNITS)				
Less than 10	2,146	31.5	6,408	(868)
10 - 49	2,126	41.5	3,556	(2,704)
50 - 99	2,217	42.4	3,353	(546)
100 - 199	2,172	42.4	3,263	(365)
200 or more	2,254	44.7	3,144	(171)
SETTLEMENT SIZE				
Rural	1,944	38.5	4,392	(1,317)
2,500 - 9,999	2,104	41.4	3,431	(1,072)
10,000 - 29,999	2,198	43.2	3,240	(617)
30,000 - 99,999	2,108	43.2	3,053	(566)
100,000 - 499,999	2,272	44.5	3,195	(507)
500,000 or more	2,251	41.7	3,540	(575)
ALL	2,190	42.6	3,389	(4,654)

SOURCE: Administrative Expense Data Base, Program Evaluation Division, CMHC, 1988.

NOTE: Total operating losses are reported here. These include federal, provincial and municipal shares.

H. Summary

As is the case with management of the public housing portfolio generally, the responsibility for the preparation of public housing operating budgets lies with provincial and territorial housing corporations. Few explicit cost control guidelines exist for the operating phase, a reflection of the fact that responsibility for day-to-day administration was vested with provincial and territorial housing agencies. CMHC's manuals state simply that public housing operating costs are to be "reasonably consistent with costs of any known or similar projects under CMHC administration". In addition to these general guidelines, there are specific stipulations controlling expenditures on administration and on modernization and improvements.

Expenditures averaged $5,545 per unit in 1986. With revenues of approximately $2,450 per unit recovering just under one-half (44.2 per cent) of total expenditures, an average operating loss of $3,098 per unit was recorded. Operating losses for projects financed under Section 79 are shared on a 75/25 per cent basis by federal and provincial/territorial governments, respectively. Losses incurred by projects financed under Section 82 are shared equally by federal and provincial/territorial governments. In some cases, a portion of the provincial or territorial share of operating losses has been passed on to municipal governments. Approximately 54.8 per cent of operating losses for the combined Section 79 and Section 81/82 portfolios are covered by federal subsidies, with the remainder being contributed by provincial/territorial and municipal governments (42.1 per cent and 3.1 per cent, respectively). The annual federal subsidy for each unit of public housing supported by the program was therefore $1,698 in 1986.

Together, expenditures on amortization (37.2 per cent) and municipal taxes (14.0 per cent) accounted for over one-half of the total expenditures on the public housing portfolio in 1986. Remaining expenditures were allocated among operating expenses (14.4 per cent), utilities (13.0 per cent), maintenance (7.3 per cent), modernization and improvement (8.3 per cent) and administrative costs (5.8 per cent).

Real operating losses per unit declined over the course of the 1979-86 period. After accounting for inflation, operating losses per unit were 14.5 per cent lower in 1986 than they were in 1979. This decline in operating losses is principally the result of a marked increase in real revenues per unit (19.0 per cent), as well as a 2.5 per cent reduction in operating expenditures per unit. Average expenditures per unit declined in six of the seven budget categories between 1979 and 1986: operating (-20.0 per cent), amortization (-16.0 per cent), maintenance (-11.9 per cent), taxes (-4.6 per cent), administration (-5.3 per cent) and utilities (-1.5 per cent). Modernization and improvements was the only budget category which recorded increased expenditures per unit in real terms (+153.0 per cent). With revenues increasing at a faster pace than expenditures, the rate of cost recovery increased steadily over the course of the 1979-86 period.

A comparison of public housing operating costs among provinces and territories reveals that average expenditures per unit were highest in Northwest Territories ($16,168), followed by Yukon ($8,949), Newfoundland ($6,763) and Alberta ($6,452). Average expenditures per unit were lowest in Manitoba ($4,930), Saskatchewan ($4,977), Nova Scotia ($5,228) and Quebec ($5,293). Average expenditures in the remaining provinces and territories ranged from $5,349 to $5,885 per unit.

A variety of factors contribute to provincial and territorial variations in operating expenditures per unit. Differences in accessibility influence the costs of key inputs to both the construction and operation of the portfolio, whether they be construction materials, labour, or fuel, electricity and water. Differences in climate affect the consumption of fuel and electricity to heat and operate public housing projects and also influence the cost of maintaining the portfolio. Differences in provincial and territorial housing policies and approaches to portfolio management also influence variations in operating expenditures among these jurisdictions.

Provincial and territorial variations in operating expenditures are also strongly influenced by underlying differences in the characteristics of their respective public housing portfolios. In particular, family projects are more costly to operate than seniors projects. The cost of operating public housing projects also varies according to the age of the project. In terms of overall expenditures, the newest projects are the most expensive to operate. This is due to the higher amortization costs incurred among this component of the portfolio. In contrast, per unit expenditures on project operations, maintenance and modernization and improvement increase with the age of the project.

Among building types, the highest expenditures per unit are exhibited by projects consisting of detached, semi-detached, and row structures. Apartment projects are less costly to operate in every budget category with the exception of taxes and project operations (in the case of high rise projects) and amortization (in the case of low rise projects). Per unit expenditures in most budget categories decline with increasing project size. Public housing projects located in rural areas manifested higher than average overall expenditures per unit.

High operating losses per unit were recorded for projects with fewer than 10 units ($6,408), projects developed between 1980 and 1987 ($5,485), rural projects ($4,392), projects comprised of detached, semi-detached and row houses ($4,203) and family projects ($4,113). Public housing projects in the Northwest Territories, the Yukon, Newfoundland and Alberta had the highest operating losses per unit: $14,620, $5,808, $5,098, and $4,176, respectively.

XVI KEY FINDINGS AND IMPLICATIONS FOR PUBLIC HOUSING IN CANADA

This chapter summarizes the main findings and conclusions of the evaluation, assesses the implications for public housing in Canada and identifies a variety of actions that could enhance the management of the program in the future. The chapter is organized into four sections which cover the characteristics of the stock and the characteristics of public housing clients; the physical condition of the stock; the quality of life in public housing; and, the management of the Public Housing Program.

The first section on the characteristics of the stock and the characteristics of public housing clients provides background information on the program. Subsequent sections specifically address the objectives of the Public Housing Program:

OBJECTIVE	SECTION
"adequate housing/ decent/safe housing"	o the physical **condition** of the stock
"decent/safe housing" "provide accommodation which most effectively integrates public housing occupants into the community"	o the **quality of life** in public housing
"efficient and effective manner" "reasonable costs to the government involved" "individuals and families of low income "within their financial capabilities at rents they can afford"	o the **management** of the program

CHARACTERISTICS OF THE STOCK

The public housing portfolio is diverse in character.

Public housing has been developed in every Canadian province and territory and in communities of all sizes, including rural areas. Projects are comprised of a variety of building types, ranging from single family detached homes to large high-rise buildings. Individual projects range in size from 1 to 1,395 units.

Most public housing units are less than twenty years old.

Although federal financial assistance for the development and operation of public housing projects has been available for almost forty years, the majority of the stock is of considerably more recent origin. Fully 87.2 per cent of all public housing units are less than twenty years old.

The Public Housing Program serves two distinct client groups (families and senior citizens) which differ greatly in their characteristics and their needs.

Single parent families account for one-half of all households residing in family projects. Over half (57.9 per cent) of residents of family public housing projects are under the age of 25; 37.5 per cent are children under the age of 15. Just over one-third of family clients are employed. Provincial or municipal social assistance is the major source of income for one-half of family clients.

Over four-fifths of all residents of seniors projects are aged 65 years or older; 34.1 per cent are at least 75 years of age. One-fifth of seniors households have one or more members who are disabled or infirm. Almost all seniors clients are single person households (85.4 per cent) and are retired or are unable to work due to disability (92.3 per cent). Approximately 60 per cent of seniors clients rely on Old Age Security and the Guaranteed Income Supplement as their principal source of income.

Roughly equal numbers of family and seniors households are served by the Public Housing Program. Overall, only one-quarter of all clients are in the labour force (either employed or unemployed but looking for work). Average household incomes for public housing residents were $10,632 in 1988, only 40 per cent of the average income of renter households in general.

The diversity of the stock (in terms of location, project size, building type and project age) and the characteristics of public housing clients, pose a range of management challenges for preserving the stock and responding to client needs in a cost-effective and efficient manner.

PHYSICAL CONDITION OF THE STOCK

For the first time, the 1988 Physical Condition Survey provides a detailed, accurate and comprehensive assessment of the condition of Canada's public housing stock.

The public housing stock is in good condition overall.

Whether using units, buildings, sites or projects as the unit of analysis, at least 94 per cent of the total portfolio meets or exceeds Minimum Property Standards. Although the stock is generally in good condition, it is estimated that 169 projects (3.5 per cent), 1,400 buildings (6.0 per cent) and 8,200 units (4.0 per cent) fail to meet Minimum Property Standards. In addition, more than half of all projects only minimally meet Minimum Property Standards and are at risk of falling below the standards.

Although the public housing stock is in good condition overall, repair and replacement actions valued at $350 million are required.

As part of the Physical Condition Survey, CMHC inspectors recommended repair and replacement actions valued at an estimated $350 million for the public housing portfolio nationwide. In most cases, repair and replacement costs are fairly modest. Over one-third of all projects (37.8 per cent) require actions costing less than $5,000, while almost one-half (47.6 per cent) require less than $10,000.

Measured on a per unit basis, the average repair cost is $1,693. Almost half of all projects (47.0 per cent) required repair and replacement costs of less than $500 per unit.

A minority of projects in very poor condition require the majority of repair and replacement costs.

Measured on a cost per project basis, the 2.8 per cent of projects (containing 15.4 per cent of all units) which require $500,000 or more for repairs and replacements account for over half of all repair and replacement costs.

Measured on a cost per unit basis, the 6.9 per cent of projects (containing 7.5 per cent of all units) which require $5,000 or more per unit for repairs and replacements account for 44 per cent of all repair and replacement costs.

Physical condition is not uniform across all components of the portfolio.

Generally speaking, projects committed prior to 1970, those serving family clients and those containing a mixture of building types are in the poorest condition.

Costs of additions and upgrades to the public housing stock are estimated at $133 million.

As part of the Physical Condition Survey, CMHC inspectors collected information on the need for additions and upgrades to the public housing stock in the areas of fire safety, lighting, ventilation, energy efficiency and durability/maintenance. These additions and upgrades are either necessary to meet current code requirements or would result in major cost savings.

There exists a backlog in funding of needed repairs, replacements, additions and upgrades in the public housing stock.

Assuming that the 1988 maintenance and M&I budgets for the program, totalling $274 million, are appropriately allocated to public housing projects according to levels of need, a funding backlog in the order of $209 million exists.

The level of the estimated backlog should be treated with caution.

It is difficult with the data available to establish whether the backlog has increased or decreased in recent years. Increased attention on the preservation of the existing stock and increasing maintenance and modernization and improvement expenditures through the 1980's, suggest that the level of the backlog could be decreasing.

A continued increase in maintenance and M&I levels in future years could accommodate the annual accrual of "new" repairs, replacements, additions and upgrades as well as the backlog identified.

Under the assumption that increasing maintenance and M&I expenditures have helped diminish the level of the backlog in recent years, a continued increase in maintenance and M&I levels could help decrease the level of the backlog. This observation should be tempered by the fact that the level of "new" annual accrual of need is likely to increase with the aging of the stock.

There is evidence that projects which are in the worst condition have not received their fair share of maintenance and M&I funding.

Projects failing the NHA Minimum Property Standards had the highest incidence of postponement of maintenance because of a lack of budget. Furthermore, projects which require $5,000 or more per unit for repairs and replacements had the highest incidence of postponed maintenance and M&I because of a lack of budget.

Maintenance activities appear to have been increased in some projects to make up for a shortage of M&I expenditures.

Although the level of postponed maintenance because of lack of budget decreases in projects where more funds are available for maintenance, the incidence of postponed M&I because of lack of budget increases steadily as maintenance expenditures per unit increase.

The change in the age profile of the public housing stock over the next fifteen years will have an impact on project condition.

In 1988, the average age of the stock was 14 years. By the year 2003, all 4,801 projects will be older than 15 years and over 60 per cent of projects will be over 25 years old. Given the present condition profile of the stock, the aging of the portfolio will have a negative impact on its physical condition.

The potential for increased deterioration of the stock presents an opportunity to improve the management of physical condition. Specifically, the focus should not be just on those projects which currently exhibit major repair and replacement requirements, but it should also be on preventing other parts of the portfolio from deteriorating to a similar condition. In particular, projects which only minimally meet Minimum Property Standards and are at risk of falling below the standards should be targeted for attention.

Periodic monitoring of the overall condition of the public housing portfolio should be instituted. This should become a normal component of enhanced portfolio management practices and would enable a better allocation of maintenance and M&I resources. Periodic monitoring of condition would also provide time-series data which are needed to indicate clearly whether the condition of the stock is improving or deteriorating.

There is a need for redesign and redevelopment (modification/regeneration) of a small portion of the public housing portfolio.

The evaluation estimated that up to 500 projects which either fail or just meet NHA Minimum Property Standards (10.5 per cent of the portfolio) were candidates for some form of redesign and redevelopment. Among this group, about 57 projects (1.2 per cent of the total portfolio) do not meet NHA Minimum Property Standards for Existing Residential Buildings. Although regeneration activities are not necessarily restricted to projects in poor condition, regeneration efforts to this date have been in projects which were in poor physical condition. These 57 projects are therefore the most likely candidates for redesign and redevelopment and constitute a lower-bound estimate.

Although estimating redesign and redevelopment costs is difficult, the evaluation provides a lower-bound estimate of $133 million (for 57 projects), and an upper-bound estimate of $289 million (for 500 projects). These estimates recognize that redesign and redevelopment needs are more serious in projects which fail the NHA Minimum Property Standards.

The level of time and staff resources necessary in previous regeneration efforts indicate that any future regeneration efforts would have to be phased over several years. The cost estimates for redesign and redevelopment are therefore not included in the estimate of the backlog of repairs and replacements, additions and upgrades.

A separate modification (regeneration) initiative should be established to address the needs of projects which are beyond normal maintenance and M&I.

At present, there is little data for identifying the individual projects which are candidates for modification at the national level.

The identification and monitoring of potential candidate projects for modification (regeneration) should be an integral part of the periodic review and monitoring of the overall condition of the public housing portfolio.

The case studies illustrated that public housing projects which are candidates for modification often experience complex physical and/or social problems.

A modification (regeneration) program should involve sound planning and a multi-disciplinary team of experts to investigate all the evident problems within the projects and all the solutions that might apply, without a predisposition to recommending physical changes. The use of experts with experience in previous modification projects would also ensure that lessons learned are transferable.

Tenant support and involvement is critical to successful modification (regeneration) of public housing projects.

Both the case studies and past regeneration efforts indicate that any major physical modification to a project or its social environment would be hard to achieve without tenant support. Tenants living in an environment where they are alienated may resist supporting or co-operating with a redesign or redevelopment team.

Active participation of the tenants and other government bodies serving the tenant population is essential to the achievement of modification (regeneration) goals.

QUALITY OF LIFE IN PUBLIC HOUSING

Clients have improved their living conditions as a result of the move to their current public housing unit.

Most public housing residents had previously been housed in either the private rental market (45.0 per cent) or the private ownership market (23.3 per cent). Approximately one-fifth of tenants moved to their current unit from a different public housing project or another unit in the same project. High rental costs (57.1 per cent), inadequate dwelling size (44.4 per cent) and poor dwelling condition (35.4 per cent) were the most commonly reported reasons for moving to public housing. Over 60 per cent of clients were housed within six months of application, while 78 per cent were housed within one year of application.

In comparing their current housing unit to the one they occupied previously, the majority of respondents cited improvements in rental costs (67.1 per cent), dwelling size (64.3 per cent), state of repair (56.6 per cent) and privacy/independence (53.0 per cent). These are the areas which most closely conform to formal program objectives (affordable, suitable and adequate housing). The Public Housing Program has also been successful in terms of providing housing which maintains or improves access to facilities and services and to clients' established social networks (friends and family).

While the Public Housing Program has been successful in improving the housing conditions of its clients, it has been less successful in providing safe environments.

When comparing their current dwelling to the one they occupied previously, almost one-quarter of survey respondents reported worse conditions with respect to crime and vandalism, only slightly less than the proportion citing improvements (30.9 per cent). Among family projects, a greater proportion cited worse crime and vandalism conditions (35.6 per cent) than did improvements (21.6 per cent).

Public housing clients are satisfied with their homes.

87.3 per cent of public housing residents expressed overall satisfaction with their home, compared to 76.8 per cent recorded by a survey of renter households in general.

Public housing tenants expressed some dissatisfaction over the way projects are run (19.4 per cent). When individual aspects of project management are examined, security emerges as a major concern, with 26.2 per cent of clients dissatisfied. Dissatisfaction with project security was particularly prevalent among residents of family projects (41.9 per cent). Clients also expressed a similar degree of dissatisfaction with the speed with which their requests were addressed by project staff (25.2 per cent dissatisfied overall; 38.2 per cent dissatisfied in family projects).

Crime is viewed by residents to be a significant problem in family public housing projects.

Property related crimes (e.g. vandalism and property theft) are the most pervasive problems. Vandalism and drug dealing were each reported to be major problems by just over one-third of family clients. Property theft and assault were reported to be major problems by one-quarter and one-fifth of family clients, respectively. While the majority of projects do not appear to have major problems with drug dealing, the case studies underscore the severe social stress that projects undergo when drug trafficking becomes firmly established. In complete contrast, major problems with crime reported by residents of senior citizen projects were very isolated.

The emergence of security as a major concern of tenants is a reflection of the problems with crime in family public housing projects. The overall security and safety of residents are threatened in a portion of the family public housing portfolio, to the detriment of the young families and youth who reside in them. Resolving problems of security deserve as much attention as issues related to the condition of the stock.

Problems with crime do not appear to be a feature of public housing per se, but rather are reflective of the dynamics of crime prevailing in the community at large (e.g. related to low-incomes, large cities, etc.).

The incidence of major problems with vandalism in family public housing projects (as revealed in residents' perceptions) were generally similar to those recorded by renters and low-income households in general with respect to their areas of residence. However, the incidence of major problems with property theft, assault and drug dealing reported by family clients were lower than those recorded among renters and low-income households generally. Major problems with crime reported by residents of senior citizen projects were much lower than those reported by senior citizens in the population at large.

MANAGEMENT OF PUBLIC HOUSING

Responsibilities for the day-to-day management of the portfolio are highly decentralized.

While the day-to-day management of the public housing portfolio is the responsibility of Provincial and Territorial housing agencies, in most cases these duties have been delegated to Local Housing Authorities. In provinces which retain these responsibilities, the activities are often performed through regional offices. Nationally, there are approximately 1,100 Local Housing Authorities, private organizations and provincial or territorial offices which perform this function. The portfolios managed by individual management groups range in size from 2 units to 29,151 units. If the number of local public housing management groups is any indication, operational management is most decentralized in Quebec, Alberta and Saskatchewan.

Provincial and territorial property management programs have evolved differently. Provincial and territorial support for project level management can be improved in certain areas.

The differences in provincial and territorial management are associated with characteristics such as portfolio size, centralized or decentralized management, dominant client type and portfolio age.

Several provinces and territories did not have adequate management control in the six areas selected as key indicators of management performance. Three of these areas, accreditation and training of project managers, the management of unit condition and management planning, were found to be strongly related to the physical condition of the public housing stock.

However, the emergence of the preservation of the public housing stock as a high priority seems to have resulted in increased attention to strengthening provincial and territorial support for project level management.

Since day-to-day administration of the portfolio rests with the provinces and territories, CMHC has not played an active role in the management of the stock.

Federal objectives for the program, originally developed for the delivery of new units, do not reflect the current project and property management thrust of the program. Similarly, federal guidelines and procedures for a property management program do not exist, with the exception of guidelines to control expenditures, such as maximum financial exposure for maintenance and M&I. Furthermore, prior to the evaluation, detailed program data were not automated and therefore were not readily accessible for the monitoring and management of the portfolio.

CMHC should play a more active role in the management of the stock by guiding the evolution of the program and by monitoring its performance.

Federal Public Housing Program objectives should be updated to reflect the property management orientation of the program. In addition, previous activity-oriented objectives should be replaced with results-oriented objectives.

Performance measures should be developed to establish program goals and monitoring standards to allow all parties to assess risks and management effectiveness.

Cost control mechanisms appropriate for an aging portfolio should be developed (Modernization and Improvement Authorities were reviewed by CMHC in 1989).

Monitoring requires the availability of automated (current and time series) information. These data would include basic characteristics of the stock and tenants, and administrative expenditure patterns. A second level of information would include the monitoring of physical condition and of the management and social environments.

Projects requiring the greatest attention or in the greatest need do not appear to receive the greatest attention.

A range of indicators throughout the evaluation have documented the fact that projects identified as being in greater need (e.g. older projects, family projects) have received less attention in relative terms.

The percentage of projects with postponed maintenance (where budget was a problem) was highest in the older projects, in family projects, and in projects that failed the physical condition survey.

The majority of project managers are responsible for portfolios of less than 100 public and social housing units. However, managers of older family projects, which had a higher incidence of poor condition, are responsible for larger portfolios.

The level of staff resources per 100 units was also lower for older projects, larger projects as well as projects with high-rise buildings or a mix of building types. Although economies of scale may be associated with larger high-rise projects, it is questionable whether the savings are sufficiently large to account for their having lower staffing levels than for smaller projects or projects composed of detached, semi-detached or row housing.

Within a given budget and recognizing that each project requires a certain annual investment, maintenance and M&I budgets should be allocated according to need in property management programs with those projects and units in greatest need receiving a share of the budget in proportion to that need.

Project managers have a high degree of experience.

Project managers have considerable experience with an average of over six years as project manager, and most managers emerge through the program. Only one-tenth of managers are Certified Property Managers (CPM) or have received other designation or accreditation. Ontario, Manitoba, Saskatchewan and British Columbia account for almost all accredited managers.

Not all project managers can accurately assess the physical condition of their projects.

When project manager and inspector ratings of project condition are matched and compared, 37 per cent of project managers give their project a higher rating than the inspector, 52 per cent give it the same rating and 11 per cent give their project a lower rating than the inspector.

Project managers could benefit from additional training in property management. Project managers could particularly benefit from further training in the area of standards of condition and the assessment of the physical condition of projects.

There is some form of tenant involvement in most public housing projects but it is not formalized through tenant committees.

Only a minority of projects, 13.7 per cent, have no form of tenant involvement at all. The majority of public housing projects have some form of tenant involvement in the maintenance of grounds and common areas, social or recreational programs, protection against vandalism and project security. Tenant involvement in office support and budgeting is much lower with only 10 per cent of projects reporting some form of involvement in this area.

Although meetings between project staff and tenants occur in almost 40 per cent of projects, meetings between project staff and formal tenant committees occur in only 15.9 per cent of projects. This indicates that, although some form of tenant involvement exists in the majority of projects, this involvement is not usually organized through a tenant committee structure. Meetings are more common in seniors projects and in larger public housing projects.

Project managers are open to advice from tenants and to the formation of tenant committees. The support of project managers for direct tenant involvement in the management of projects is much lower.

Managers in 75 per cent of projects agreed they should pay close attention to the advice of individual tenants. Furthermore, managers in over 60 per cent of projects agreed that tenant organizations should exist to provide advice and suggestions to the project management team.

Managers in close to half of public housing projects agreed that tenants should have no role in the management of their project. The opposition of project managers is greater when major tenant involvement is considered. Managers in almost 80 per cent of projects disagreed with the statement that tenants should play a major role in the management of their project.

Project management provides support for tenant meetings in just over one-quarter of public housing projects.

Support (i.e. meeting spaces, materials) for tenant meetings is provided by management in over one-quarter of public housing projects, including over half of all public housing units. Support for tenant meetings is more common in seniors projects and in larger public housing projects.

Meeting rooms are available and satisfactory in approximately half of public housing projects.

Project managers assessed that meeting rooms were satisfactory in just over half of public housing projects, including almost 70 per cent of all public housing units. Meeting rooms are not satisfactory in 7.0 per cent of projects, including 8.8 per cent of all units, or simply not available in 38.7 per cent of projects, including 21.5 per cent of units. Meeting rooms are more available in seniors projects and in larger projects.

Tenants are generally satisfied with the way their projects are run.

More than 80 per cent of tenants are satisfied with the way their project is run overall. However, tenants are less satisfied with some aspects of project management than others. In particular, tenants expressed their greatest dissatisfaction with the performance of management with regard to security and the speed with which requests are handled. Families were less satisfied with project management than were seniors.

Tenant satisfaction does not vary by their level of involvement, but tenants want a greater role in the running of their project.

No causal relationship can be established between level of involvement and satisfaction with project management as it remains unclear whether tenant dissatisfaction with project management leads to involvement.

Irrespective of their current level of involvement, approximately one-third of tenants are in favour of greater tenant involvement in the management of their project. The majority of decided tenants want more involvement, but over one-third of surveyed tenants did not express an opinion.

The feasibility of promoting greater tenant input and involvement in the management of public housing projects should be further explored. At the same time, support and training should be provided for project managers to deal with the resulting changes in the management environment of public housing.

Not all public housing units are utilized.

Over 6 per cent of units were vacant for one month or more during the year preceding the survey. This represents a lost capacity of over 1,000 units per annum. The most common reasons for long-term vacancies were lack of need, physical condition and unit suitability. Vacancy rates were higher in rural areas, where underutilization is predominantly characterized by low need for public housing units. Projects with unsatisfactory facilities and services and those located near derelict or dangerous buildings had higher than average vacancy rates.

The underutilization of projects, particularly in rural areas, indicates the importance of accurately assessing the need and demand for social housing units. Need and demand analyses for new social housing delivery and existing projects should be strengthened, including the monitoring of vacancy rates in existing projects.

Concerning vacancies associated with tenant turnover, almost 77 per cent of units were ready for occupancy within 14 days of tenant departure.

Tenant turnover has been handled very effectively in most projects, resulting in a low loss of occupancy months to the portfolio; however, there is still a portion of the portfolio where tenant turnover procedures could improve.

The physical conversion of units is costly.

Conversions were found to be a costly solution to the problem of under-utilized stock. Conversions could also result in a net decrease in the total number of units because many requested conversions are from small to larger units. Although units identified for conversion are considered to be less desirable by tenants, vacancy rates for these units are still low and units are generally in good condition. Based on case study analyses, the estimated cost of conversion from a bachelor to a one bedroom unit is about $20,000.

Non-physical options such as a change in client (e.g. non-elderly singles in bachelor units) or a change in use (e.g. nursing facility in bachelor unit) should be considered prior to physical conversion.

Total expenditures under the program in 1986 exceeded $1 billion.

Total expenditures under the program in 1986 exceeded $1 billion ($5,545 per unit). Revenues of almost $500 million ($2,450 per unit) resulted in operating losses of about $600 million ($3,098 per unit) in 1986. The CMHC share of this operating loss was $329 million ($1,698 per unit).

Only a small portion of current program expenditures are for repairing and upgrading the stock. Amortization and taxes currently consume approximately one-half of total annual expenditures on the portfolio.

Over 37 per cent of total expenditures are for amortization ($2,078 per unit). Taxes ($780 per unit), utilities ($721 per unit) and administration ($321 per unit) consume an additional 33 per cent of all expenditures leaving less than one-third of total expenditures for operations ($794 per unit), maintenance ($409 per unit) and M&I ($458 per unit).

As mortgages reach the end of their amortization term, the proportion of project budgets consumed by principal and interest payments will decline. The impact of mortgage termination will not begin to be felt for 20 to 30 years, however.

As individual mortgages reach the end of their amortization period and are paid in full, the proportion of total operating expenditures required for amortization will begin to decline. The majority of amortization terms were set at 50 years in duration. Consequently, the impact of mortgage termination will not begin to be felt with any magnitude for 20 to 30 years. Mortgages for approximately 12 per cent of all projects will be paid in full by the year 2019; mortgages for two-thirds of all projects will be paid in full by the year 2029.

The Public Housing Program is well targeted to low-income households.

The program is well targeted to low-income households, with 96.1 per cent of clients reporting household incomes below the appropriate "core need income threshold" for the area in which they live.

Although the program is well targeted, just under 40 per cent of public housing tenants continue to be in core need.

Despite the assistance provided through the Public Housing Program, 39.9 per cent of households surveyed remain in core need. Approximately two-thirds of those identified as being in core need are experiencing affordability problems only (i.e. shelter costs equal to or greater than 30 per cent of their income). A further 12.1 per cent of clients occupy units which are affordable and suitable, but are in need of major repairs, while 4.5 per cent have only suitability problems. Approximately one-fifth have multiple problems. The incidence of public housing residents in core need was highest in British Columbia (71.8 per cent) and New Brunswick (68.9 per cent).

A review of the various rent scales currently in use and the manner in which they are implemented is warranted, given the incidence of affordability problems detected.

Fundamental differences exist between projects which house families and those which house senior citizens.

Significant differences exist between family and seniors projects with respect to client characteristics, the physical condition of the stock, client satisfaction and quality of life, project management and operating costs.

From a program planning, budgeting and monitoring perspective, it is inappropriate to treat the Public Housing Program as "one" program. The senior citizen public housing portfolio should be treated as a component distinct from the family public housing portfolio.

APPENDIX A

PHYSICAL CONDITION SURVEY
PUBLIC HOUSING EVALUATION
SAMPLE CHARACTERISTICS (WEIGHTED AND UNWEIGHTED)

PROJECT CHARACTERISTICS	SAMPLE SIZE (n)	WEIGHTED SAMPLE (N)
PROGRAM		
Section 79	357	1,438.43
Section 81/82	644	3,354.56
PROVINCE/TERRITORY		
Newfoundland	46	176.00
Prince Edward Island	39	89.00
Nova Scotia	79	475.00
New Brunswick	45	157.00
Quebec	180	630.00
Ontario	242	1,327.00
Manitoba	71	336.00
Saskatchewan	93	577.00
Alberta	83	530.00
British Columbia	60	100.00
Yukon	21	21.00
Northwest Territories	42	375.00
CLIENT		
Family	476	2,292.37
Senior	442	2,280.30
Family & Senior	78	198.41
Other	5	21.92
PROJECT AGE		
Pre-1964	72	91.37
1964-1969	97	362.52
1970-1974	344	1,330.03
1975-1979	320	1,781.97
1980-1987	168	1,227.10
BUILDING TYPE		
Detached, Semi & Row	405	2,605.24
Low rise	212	1,483.51
High rise	269	517.43
Mixed (no high rise)	57	122.81
Mixed (with high rise)	58	64.00
PROJECT SIZE (UNITS)		
Less than 10	91	1,034.81
10 - 49	371	2,669.88
50 - 99	129	543.76
100 - 199	243	377.55
200 or more	167	167.00
SETTLEMENT SIZE		
Rural	131	1,330.11
2,500 - 9,999	126	953.34
10,000 - 29,999	140	886.41
30,000 - 99,999	168	580.86
100,000 - 499,999	228	497.05
500,000 or more	208	545.23
ALL	1,001	4,793.00

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

SURVEY OF PUBLIC HOUSING TENANTS
PUBLIC HOUSING EVALUATION
SAMPLE CHARACTERISTICS (WEIGHTED AND UNWEIGHTED)

PROJECT CHARACTERISTICS	SAMPLE SIZE (n)	WEIGHTED SAMPLE (N)
PROGRAM		
Section 79	974	41,087.00
Section 81/82	1,737	163,829.00
PROVINCE/TERRITORY		
Newfoundland	156	4,710.00
Prince Edward Island	203	951.00
Nova Scotia	211	10,162.00
New Brunswick	230	3,892.00
Quebec	452	35,194.00
Ontario	682	96,440.00
Manitoba	147	12,808.00
Saskatchewan	196	12,312.00
Alberta	177	16,899.00
British Columbia	207	7,949.00
Yukon	22	261.00
Northwest Territories	28	3,338.00
CLIENT		
Family	1,121	89,299.22
Senior	1,351	101,090.63
Family & Senior	230	14,117.15
Other	9	479.00
PROJECT AGE		
Pre-1964	214	9,493.68
1964-1969	294	20,693.21
1970-1974	952	83,012.94
1975-1979	862	67,930.01
1980-1987	389	23,786.17
BUILDING TYPE		
Detached, Semi & Row	791	54,321.53
Low rise	558	45,961.22
High rise	951	75,197.43
Mixed (no high rise)	210	13,008.34
Mixed (with high rise)	201	16,427.48
PROJECT SIZE (UNITS)		
Less than 10	107	5,763.42
10 - 49	772	55,678.57
50 - 99	393	36,247.16
100 - 199	834	52,486.26
200 or more	605	54,740.59
SETTLEMENT SIZE		
Rural	226	14,638.40
2,500 - 9,999	318	18,128.42
10,000 - 29,999	370	25,904.71
30,000 - 99,999	528	33,740.86
100,000 - 499,999	734	59,708.27
500,000 or more	535	52,795.34
ALL	2,711	204,916.00

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1988.

SURVEY OF PUBLIC HOUSING PROJECT MANAGERS
PUBLIC HOUSING EVALUATION
SAMPLE CHARACTERISTICS (WEIGHTED AND UNWEIGHTED)

PROJECT CHARACTERISTICS	SAMPLE SIZE (n)	WEIGHTED SAMPLE (N)
PROGRAM		
Section 79	1,306	1,445.09
Section 81/82	3,026	3,365.41
PROVINCE/TERRITORY		
Newfoundland	162	177.12
Prince Edward Island	89	90.00
Nova Scotia	466	477.00
New Brunswick	125	156.00
Quebec	576	632.25
Ontario	1,248	1,331.20
Manitoba	305	338.18
Saskatchewan	525	577.00
Alberta	490	533.22
British Columbia	90	100.00
Yukon	13	22.00
Northwest Territories	243	376.53
CLIENT		
Family	2,230	2,309.65
Senior	2,121	2,298.69
Family & Senior	173	190.72
Other	8	11.44
PROJECT AGE		
Pre-1964	77	82.96
1964-1969	343	370.54
1970-1974	1,202	1,319.49
1975-1979	1,627	1,804.58
1980-1987	1,083	1,232.95
BUILDING TYPE		
Detached, Semi & Row	2,023	256.64
Low rise	1,440	2,309.10
High rise	471	1,549.57
Mixed (no high rise)	106	520.00
Mixed (with high rise)	52	117.22
Other/Unknown	240	256.64
PROJECT SIZE (UNITS)		
Less than 10	820	954.66
10 - 49	2,507	2,748.66
50 - 99	505	545.00
100 - 199	332	370.00
200 or more	149	171.15
Unknown	19	21.14
SETTLEMENT SIZE		
Rural	1,205	1,421.71
2,500 - 9,999	1,002	1,079.08
10,000 - 29,999	597	639.23
30,000 - 99,999	541	589.84
100,000 - 499,999	451	493.17
500,000 or more	536	587.47
ALL	4,332	4,810.50

SOURCE: Survey of Public Housing Project Managers, Program Evaluation Division, CMHC, 1988.

APPENDIX B

COSTS OF ADDITIONS AND UPGRADES TO PUBLIC HOUSING PROJECTS

POTENTIAL UPGRADES/ADDITIONS	COST ($)
A. FIRE SAFETY	
- Upgrade doors in corridor/stairwell/service room fire-separation walls	2,077,099
- Upgrade doors in dwelling unit fire-separation walls	6,974,328
- Upgrade door frames in corridor/stairwell fire-separation walls	712,087
- Upgrade frames in dwelling unit fire-separation walls	563,300
- Install/or extend sprinkler system units	13,240,067
- Install standpipe system	247,323
- Install additional fire extinguishers	1,156,050
- Add smoke detectors	7,968,350
- Add heat detectors	1,081,977
- Upgrade fire alarm system	507,664
- Install or upgrade fire marshall's intercom system	520,460
SUB-TOTAL	35,048,705
B. LIGHTING	
- Add lighting fixtures in dwelling units	10,236,427
- Add lighting fixtures in stairwells, corridors, lobbies and service rooms	62,766
- Add lighting fixtures in garages	15,100
- Change type of lighting (e.g. incandescent to sodium vapour) in stairwells and service rooms	0
- Change type of lighting in garages	13,500
- Add emergency lighting	868,345
- Upgrade site lighting	378,697
SUB-TOTAL	11,574,835
C. VENTILATION	
- Add corridor pressurization system	1,480,691
- Add exhaust ventilation fans in dwelling units	17,183,553
- Add exhaust ventilation fans in service rooms	144,861
- Upgrade roof ventilation	7,071,930
- Upgrade/add garage exhaust system	0
- Upgrade/add garage make-up air system	13,036
- Add ventilation for laundry dryers	78,020
SUB-TOTAL	25,972,091

POTENTIAL UPGRADES/ADDITIONS	COST ($)
D. ENERGY EFFICIENCY	
- Add insulation to basement walls (in heated areas)	9,690,595
- Add insulation to exterior walls	7,145,972
- Add insulation to attic spaces	2,930,121
- Add insulation to flat roofs	15,442,348
- Upgrade airtightness of walls	467,676
- Upgrade airtightness of roofs	1,595,174
- Upgrade airtightness of existing windows	18,900
- Add storms to existing windows	99,600
- Reglaze existing windows with double glazing	11,673,618
- Replace with new energy efficient windows	2,835,549
- Upgrade airtightness of exterior doors	601,181
- Replace exterior doors with insulated doors	1,964,529
- Replace boiler burner with high efficiency model	0
- Replace heating system boiler	69,200
- Upgrade insulation on distribution pipes	41,330
- Add building zone controls	0
- Replace dwelling unit furnace(s) with high efficiency model(s)	91,924
- Replace domestic hot water boiler burner with high efficiency model	0
- Replace domestic hot water boiler	105,057
- Add insulation to hot water distribution pipes	1,800
SUB-TOTAL	54,774,574
E. DURABILITY/MAINTENANCE	
- Change inappropriate floor finishes in dwelling units	4,630,212
- Change inappropriate floor finishes in other parts of building, (e.g. lobby, staircase, corridor etc.)	296,000
- Change inappropriate interior wall finishes in dwelling units	731,250
- Change inappropriate interior wall finishes in other parts of building	330,000
- Change inappropriate finishes to exterior walls	0
- Change inappropriate finishes to parking and roads	0
- Change inappropriate finishes to pedestrian walks	38,000
- Add/upgrade roof drainage	9,133
SUB-TOTAL	6,034,595
TOTAL	133,404,800

APPENDIX C

MEASURES OF ASSOCIATION WITH PROJECT CONDITION RATINGS ALL PROJECTS

VARIABLE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Client type	114.1	0.00	0.321	N/A	992
Project age	73.5	0.00	0.262	-0.336	997
Building type1	56.9	0.00	0.232	N/A	997
Building type2*	20.4	0.00	0.150	N/A	882
Building type3	36.1	0.00	0.187	N/A	997
Project size	19.1	0.00	0.137	0.138	997
Maintenance cost per unit	69.7	0.00	0.257	-0.485	986
M&I cost per unit	8.8	0.01	0.097	-0.196	939
City	13.9	0.01	0.117	-0.208	997

* Excluding projects with mixed building types

FAMILY-FAMILY/SENIOR PROJECTS

VARIABLE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Project age	37.1	0.00	0.251	-0.104	551
Building type1	19.7	0.00	0.186	N/A	551
Building type2*	9.6	0.01	0.146	N/A	440
Building type3	10.2	0.01	0.135	N/A	551
Project size	11.7	0.00	0.144	-0.269	551
Maintenance cost per unit	18.3	0.00	0.180	-0.280	548
M&I cost per unit	4.1	0.13	0.088	0.170	519
City	10.9	0.00	0.139	-0.235	551

* Excluding projects with mixed building types

SENIOR PROJECTS

VARIABLE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Project age	30.0	0.00	0.252	-0.237	441
Building type2*	1.5	0.48	0.058	N/A	437
Project size	16.7	0.00	0.191	0.461	441
Maintenance cost per unit	9.5	0.00	0.147	-0.409	434
M&I cost per unit	0.1	0.94	0.018	0.059	417
City	4.4	0.06	0.099	-0.162	441

* Excluding projects with mixed building types

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

WHERE:

PEARSON **CHI-SQUARE** IS A MEASURE OF GENERAL ASSOCIATION BETWEEN THE INDIVIDUAL VARIABLES LISTED AND PROJECT CONDITION.

PROB IS THE SIGNIFICANCE PROBABILITY OF THE CHI-SQUARE TEST. THE NULL HYPOTHESIS OF NO ASSOCIATION IS REJECTED IF THE PROBABILITY IS LESS OR EQUAL TO 0.05 (95% LEVEL OF SIGNIFICANCE).

CONTINGENCY COEFFICIENT (p) IS A MEASURE OF THE STRENGTH OF THE RELATIONSHIP BETWEEN THE INDIVIDUAL VARIABLES AND PROJECT CONDITION (RANGE: $0 <= P <= 1$).
NOTE THAT CONTINGENCY COEFFICIENTS CANNOT BE COMPARED BETWEEN VARIABLES IF THESE HAVE A DIFFERENT NUMBER OF CATEGORIES OR IF THE STATISTICS ARE BASED ON DIFFERENT SAMPLE SIZES.

GAMMA IS ANOTHER MEASURE OF THE STRENGTH OF THE RELATIONSHIP BETWEEN THE INDIVIDUAL VARIABLES AND PROJECT CONDITION. (RANGE FROM -1 TO +1 WITH 0 INDICATING THAT THE VARIABLES ARE INDEPENDENT).

NOTE THAT GAMMA IS ONLY APPROPRIATE WHEN BOTH VARIABLES ARE MEASURED ON AN ORDINAL SCALE.

n IS SAMPLE SIZE FOR THE MEASURES OF ASSOCIATION OF EACH VARIABLE WITH PROJECT CONDITION.

AND WHERE:

CLIENT TYPE HAS BEEN REGROUPED IN VARIABLE 'C1'

WITH 0 = Family or Family/Senior Project
1 = Seniors Project

PROJECT AGE IS CATEGORIZED IN VARIABLE 'AGE'

WITH 0 = 1 to 10 years
1 = 11 to 15 years
2 = 16 to 25 years
3 = over 25 years

PROJECT SIZE IS CATEGORIZED IN VARIABLE 'SIZE'

WITH 0 = 1 to 199 units
1 = 200 units or more

BUILDING TYPE1 IS CATEGORIZED IN VARIABLE 'B1A'

WITH 0 = detached-row
1 = low rise or high rise only
2 = mixed with or without high rise

BUILDING TYPE2 IS CATEGORIZED IN VARIABLE 'B1B'
(excludes projects with mixed building types)

WITH 0 = detached-row
1 = low rise or high rise only

BUILDING TYPE3 IS CATEGORIZED IN VARIABLE 'B1C'

WITH 0 = detached-row or low rise or high rise only
1 = mixed with or without high rise

AVERAGE ANNUAL MAINTENANCE COST PER UNIT (1979-86) IS CATEGORIZED IN VARIABLE 'MAINT'

WITH 0 = low ($1 - $571)
1 = high ($572 or more)

AVERAGE ANNUAL M&I COST PER UNIT (1979-86) IS CATEGORIZED IN VARIABLE 'MANDI'

WITH 0 = low ($1 - $366)
1 = high ($367 or more)

CITY IS AN INDICATOR OF LARGE MUNICIPALITY CATEGORIZED IN VARIABLE 'CITY'

WITH 0 = population below 500,000
1 = population of 500,000 or above

LOGISTIC REGRESSION MODEL OF PROJECT CONDITION

Once one-on-one relationships were examined between project characteristics and past expenditures on maintenance and M&I and project condition, logistic regression models (logit models) were also used to establish the variables which most influence project condition. Similar to multiple regression models, logit models measure the independent effect of individual variables on project condition while controlling for other variables in the model.

LOGISTIC REGRESSION MODEL OF PROJECT CONDITION
ALL PROJECTS

MODEL	MODEL CHI-SQUARE (-2 LOG LIKELI-HOOD RATIO)	PROB.	R	n
1. C1	117.0	0.00	0.257	992
2. C1 AGE	127.0	0.00	0.266	992
3. C1 AGE B1C	135.3	0.00	0.272	992
4. C1 AGE B1C MAINT	149.5	0.00	0.287	982
5. C1 AGE B1C MAINT M&I	166.3	0.00	0.309	936
6. C1 AGE B1C MAINT M&I CITY	170.4	0.00	0.311	936

FAMILY PROJECTS

MODEL	MODEL CHI-SQUARE (-2 LOG LIKELI-HOOD RATIO)	PROB.	R	n
1. AGE	3.0	0.08	0.033	551
2. AGE B1C*	12.3	0.00	0.095	551
3. AGE B1C MAINT*	23.5	0.00	0.138	548
4. B1C	11.4	0.00	0.097	591
5. B1C MAINT	27.7	0.00	0.155	588
6. B1C MAINT M&I	34.7	0.00	0.177	559

SENIORS PROJECTS

MODEL	MODEL CHI-SQUARE (-2 LOG LIKELI-HOOD RATIO)	PROB.	R	n
1. AGE	9.1	0.00	0.101	441
2. AGE B1B	9.3	0.01	0.087	441
3. AGE MAINT	16.0	0.00	0.132	434
4. AGE MAINT SIZE	41.6	0.00	0.227	434
5. AGE MAINT SIZE CITY	47.6	0.00	0.240	434
6. AGE SIZE	39.3	0.00	0.225	441
7. AGE SIZE CITY	44.6	0.00	0.235	441

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

* Indicates varables in a model which are not statistically significant (at 0.05 level of significance)

WHERE:

C1 = 'TYPE OF CLIENT'

WITH 0 = Family or Family/Senior Project
1 = Senior Project

AGE = 'PROJECT AGE'

WITH 0 = 1 to 10 years
1 = 11 to 15 years
2 = 16 to 25 years
3 = over 25 years

SIZE = 'PROJECT SIZE'

WITH 0 = 1 to 199 units
1 = 200 units or more

B1A = 'BUILDING TYPE'

WITH 0 = detached-row
1 = low rise and high rise only
2 = mixed with or without high rise

B1B = 'BUILDING TYPE' (excludes projects with mixed building types)

WITH 0 = detached-row
1 = low rise and high rise only

B1C = 'BUILDING TYPE'

WITH 0 = detached-row or low rise or high rise only
1 = mixed with or without high rise

MAINT = 'AVERAGE ANNUAL MAINTENANCE COST PER UNIT (1979-86)'

WITH 0 = low ($1 - $571)
1 = high ($572 or more)

M&I = 'AVERAGE ANNUAL M&I COST PER UNIT (1979-86)'

WITH 0 = low ($1 - $366)
1 = high ($367 or more)

CITY = 'INDICATOR OF LARGE MUNICIPALITY'

WITH 0 = population below 500,000
1 = population of 500,000 or above

APPENDIX D

CONFIDENCE INTERVALS (0.05 LEVEL OF SIGNIFICANCE) REPAIR AND REPLACEMENT COSTS PER UNIT PHYSICAL CONDITION SURVEY

PROJECT CHARACTERISTICS	COST PER UNIT ($) AVERAGE	MINIMUM	MAXIMUM	+/- (PER CENT)
PROGRAM				
Canada	1693	1555	1831	8.1
Section 81/82	1603	1416	1789	11.6
Section 79	2050	1774	2326	13.5
PROVINCE/TERRITORY				
Canada	1693	1555	1831	8.1
Manitoba	274	188	359	31.3
Alberta	741	529	952	28.5
Saskatchewan	891	438	1343	50.8
P.E.I.	942	251	1633	73.3
N.W.T.	1287	690	1884	46.4
Quebec	1731	1503	1958	13.1
Ontario	1762	1482	2041	15.8
Nova Scotia	1903	1484	2321	22.0
New Brunswick	2339	1941	2737	17.0
British Columbia	3158	2141	4175	32.2
Yukon	5180	5180	5180	0.0
Newfoundland	6325	4053	8596	35.9
CLIENT TYPE				
Canada	1693	1555	1831	8.1
Senior	931	743	1119	20.1
Family & Senior	1383	1162	1604	16.0
Family	2692	2411	2973	10.4
PROJECT AGE				
Canada	1693	1555	1831	8.1
1980-1987	946	509	1383	46.2
1975-1979	976	756	1196	22.5
1970-1974	1900	1642	2159	13.6
Pre-1964	3233	2793	3672	13.6
1964-1969	3646	3102	4189	14.9
BUILDING TYPE				
Canada	1693	1555	1831	8.1
High rise	1226	1028	1424	16.2
Low rise	1260	929	1592	26.3
Mixed (with high rise)	2484	2431	2537	2.1
Detached, Semi & Row	2198	1806	2580	17.8
Mixed (no high rise)	2864	2632	3096	8.1
PROJECT SIZE (UNITS)				
Canada	1693	1555	1831	8.1
50 - 99	1244	718	1770	42.3
Under 10	1416	804	2027	43.2
10 - 49	1470	1154	1787	21.5
100 - 199	1651	1266	2036	23.3
200 or more	2326	2326	2326	0.0
SETTLEMENT SIZE				
Canada	1693	1555	1831	8.1
Under 2500	920	629	1211	31.6
10K - 29.9K	1553	930	2177	40.1
2.5K - 9.9K	1632	1045	2219	35.9
100K - 499.9K	1781	1535	2027	13.8
30K - 99.9K	1795	1245	2345	30.6
500K or more	1850	1536	2164	16.9

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

CONFIDENCE INTERVALS (0.05 LEVEL OF SIGNIFICANCE)
TOTAL REPAIR AND REPLACEMENT COSTS
PHYSICAL CONDITION SURVEY

PROJECT CHARACTERISTICS	REPAIR AND REPLACEMENT COSTS (MILLIONS $) AVERAGE	MINIMUM	MAXIMUM	+/- (PER CENT)
PROGRAM				
Section 79	85.0	73.5	96.4	13.5
Section 81/82	264.3	233.5	295.1	11.6
PROVINCE/TERRITORY				
Newfoundland	29.6	19.0	40.3	5 1
Prince Edward Island	0.9	0.2	1.6	31.3
Nova Scotia	19.7	15.4	24.0	28.5
New Brunswick	9.8	8.1	11.4	50.8
Quebec	61.5	53.4	69.5	73.3
Ontario	167.9	141.3	194.5	46.4
Manitoba	3.6	2.5	4.8	13.1
Saskatchewan	11.6	5.7	17.5	15.8
Alberta	12.7	9.1	16.4	22.0
British Columbia	26.4	17.9	34.9	17.0
Yukon	1.3	1.3	1.3	32.2
Northwest Territories	4.2	2.2	6.1	0.0
CLIENT				
Family	221.5	198.4	244.7	20.1
Senior	89.6	71.6	107.0	16.0
Family & Senior	37.7	31.7	43.7	10.4
PROJECT AGE				
Pre-1964	29.0	25.1	33.0	13.6
1964-1969	72.4	61.6	83.2	14.9
1970-1974	155.0	133.9	176.1	13.6
1975-1979	69.0	53.5	84.6	22.5
1980-1987	23.8	12.8	34.8	46.2
BUILDING TYPE				
Detached, Semi & Row	119.8	98.5	141.2	17.8
Low rise	60.3	44.4	76.2	26.3
High rise	91.7	76.9	106.5	16.2
Mixed (no high rise)	37.5	34.5	40.6	8.1
Mixed (with high rise)	39.9	39.0	40.7	2.1
PROJECT SIZE (UNITS)				
Less than 10	8.5	4.8	12.1	43.2
10 - 40	85.7	67.3	104.1	21.5
50 - 99	46.9	27.1	66.8	42.3
100 - 199	84.5	64.8	104.2	23.3
200 or more	123.6	123.6	123.6	0.0
SETTLEMENT SIZE				
Rural	14.6	10.0	19.2	31.6
2,500 - 9,999	31.3	20.1	42.6	35.9
10,000 - 29,999	40.1	24.0	56.2	40.1
30,000 - 99,999	62.1	43.1	81.1	30.6
100,000 - 499,999	103.1	88.9	117.3	13.8
500,000 or more	98.0	81.4	114.6	16.9
ALL	349.2	320.8	377.8	8.1

SOURCE: Physical Condition Survey, Program Evaluation Division, CMHC, 1988.

APPENDIX E

SHELTER-COST-TO-INCOME RATIOS
SOCIAL ASSISTANCE RECIPIENTS ONLY

	RATIO OF SHELTER COSTS TO HOUSEHOLD INCOME (PER CENT)				
	UNDER 25	25-29	30-34	35 OR MORE	SAMPLE SIZE (n)
PROVINCE/TERRITORY					
Newfoundland	32.4	13.6	13.7	40.2	(49)
Prince Edward Island	-	-	-	-	(22)*
Nova Scotia	20.2	18.9	20.0	41.0	(34)
New Brunswick	2.2	17.9	46.7	33.2	(81)
Quebec	14.7	57.2	14.7	13.4	(144)
Ontario	41.8	32.2	12.9	13.1	(201)
Manitoba	6.4	12.0	0.6	81.0	(31)
Saskatchewan	-	-	-	-	(23)*
Alberta	30.6	24.0	31.0	14.4	(37)
British Columbia	10.8	13.7	27.8	47.7	(66)
Yukon	-	-	-	-	(2)*
Northwest Territories	-	-	-	-	(7)*
CLIENT TYPE					
Family	25.5	33.9	19.2	21.4	(523)
Senior	48.8	23.4	9.2	18.6	(94)
Family & Senior	24.2	43.7	8.5	23.6	(79)
HOUSEHOLD TYPE					
One person living alone	48.6	23.0	8.0	20.4	(137)
One adult with children	19.4	36.0	22.4	22.2	(330)
Couple with children	36.8	28.7	17.0	17.5	(128)
Couple without children	-	-	-	-	(24)*
Other	-	-	-	-	(22)*
HOUSEHOLD SIZE					
One person	46.6	24.9	9.6	18.9	(149)
Two persons	22.5	39.6	19.4	18.5	(151)
Three persons	13.9	41.1	22.3	22.7	(158)
Four persons	31.5	28.9	19.6	20.0	(122)
Five or more persons	25.2	35.2	13.5	26.1	(87)
ALL	29.0	33.3	16.6	21.1	(697)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Shelter costs include payments for rent, water, electricity, gas and oil.

* Insufficient cases available for analysis.

SHELTER-COST-TO-INCOME RATIOS
HOUSEHOLDS NOT RECEIVING SOCIAL ASSISTANCE

	RATIO OF SHELTER COSTS TO HOUSEHOLD INCOME (PER CENT)				
	UNDER 25	25-29	30-34	35 OR MORE	SAMPLE SIZE (n)
PROVINCE/TERRITORY					
Newfoundland	13.7	31.8	23.4	31.2	(79)
Prince Edward Island	4.5	50.4	25.1	20.0	(146)
Nova Scotia	3.6	58.4	20.9	17.2	(138)
New Brunswick	5.0	29.2	45.1	20.7	(84)
Quebec	7.8	57.8	14.7	19.6	(249)
Ontario	16.1	52.4	13.0	18.6	(318)
Manitoba	15.2	56.5	15.1	13.2	(81)
Saskatchewan	11.9	70.5	9.0	8.7	(124)
Alberta	25.4	47.9	22.9	3.9	(105)
British Columbia	10.2	10.6	51.5	27.7	(99)
Yukon	-	-	-	-	(7)*
Northwest Territories	-	-	-	-	(11)*
CLIENT TYPE					
Family	22.8	27.7	19.4	30.2	(356)
Senior	11.7	63.4	13.9	11.0	(975)
Family & Senior	8.1	47.6	26.8	17.5	(118)
HOUSEHOLD TYPE					
One person living alone	10.8	65.0	14.3	9.9	(884)
One adult with children	19.0	20.8	26.9	33.3	(139)
Couple with children	31.9	20.2	21.1	26.8	(140)
Couple without children	11.9	52.8	14.5	20.8	(171)
Other	-	-	-	-	(24)*
HOUSEHOLD SIZE					
One person	11.0	64.7	14.3	10.0	(908)
Two persons	16.7	43.5	13.9	26.0	(248)
Three persons	32.7	24.4	21.6	21.4	(91)
Four persons	14.9	25.6	33.5	26.0	(95)
Five or more persons	29.8	13.1	20.6	36.5	(67)
ALL	14.6	52.3	16.3	16.8	(1,451)

SOURCE: Survey of Public Housing Tenants, Program Evaluation Division, CMHC, 1989.

NOTE: Shelter costs include payments for rent, water, electricity, gas and oil.

* Insufficient cases available for analysis.

APPENDIX F

CMHC/Provincial/Territorial Agreements

CMHC's role in the management of the public housing program is defined in the agreements between CMHC and the provinces/territories. These agreements, which are different for each of the programs, define the arrangement between CMHC and the provinces and include certain constraints. The roles and responsibilities are not strictly defined, rather, the provincial or territorial housing authority or commission is charged with the responsibility for management, operation and administration of the units. CMHC's role is defined by the financial arrangements and other considerations such as the setting of rents. Most of what is stipulated in the agreements concerns financial arrangements and the admissibility of claim items for cost sharing. Additionally, there are requirements for the sharing of information, payments of grants in lieu of taxes, and other considerations.

Section 79 Agreements date back to 1950. However, as most building activity took place in the 1970's and 1980's, only the later Agreements have been examined (1972-1975). The Section 79 Agreements required that the design, plans, specifications and contracts for the units be approved by CMHC and the province/territory and that the buildings meet the standards set in the Canadian Code for Residential Construction (1970). The only additional constraint put on the provinces and territories, other than the financial arrangements, was that the rentals to be charged be established from time to time by CMHC and the province/territory. The rental scale in use at the time was the Graduated Rental Scale, which also includes the definition of income, the statement of what is be to included in rent (i.e. heat, water, hot water and appliances) and the requisite rent reductions for families with children.

The Agreements under Section 81/88 of the NHA have considerably more detail on the management of the stock. The requirement for CMHC/provincial/territorial approval of designs, plans, specifications and contracts and the meeting of construction standards no longer appears in the agreements. An 'individual or family of low income' is defined in the Agreements, whereas no definition appeared in the Section 79 Agreements.[1] The Section 81/82 Agreements state that CMHC and the province/territory will agree on an income considered insufficient to permit the individual or family to rent adequate housing in the area of residence.

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[1] Section (8.1) "individual or family of low income" means an individual or family that receives a total income that in the opinion of the Corporation and the Province is insufficient to permit individual or family to rent housing accomodation adequate for its need in the rental market in the area in which the individual or family lives".

Detailed statements of revenue and expenditure must be certified by a public accountant. No similar requirement appeared in the Section 79 Agreements although there is a mention of accessibility of financial and other information in all Agreements.

The Provincial or Territorial Corporation is required to lease the units to individuals or families of low income at rental rates in accordance with the Graduated Rental Scale. The Provincial or Territorial Corporation is required to take steps to verify the tenants' income not less frequently than every 24 months.

Although it is a very broad statement, the Provincial or Territorial Corporation is required to "operate and maintain the public housing project so as to best meet the social and physical objectives appropriate to a public housing project". (Section 11).

Regarding rents and CMHC'S cost sharing arrangements, where the tenant is in receipt of social assistance the provinces and territories are to charge the greater of the rent required by the Graduated Rental Scale or the shelter component of the allowance. In later Section 82 Agreements the wording is changed somewhat to state that CMHC's contribution will be based on the scale necessitating the lesser contribution.

APPENDIX G

MATRIX 1
COMPREHENSIVENESS OF SUPPORT TO PROJECT MANAGEMENT (1988)

	INDICATORS			
PROVINCE/TERRITORY	COMPREHENSIVENESS OF PROGRAM MANUALS	TRAINING AND COMMUNICATION	MAINTENANCE GUIDELINES	STAFF AT PROVINCIAL OR REGIONAL LEVEL - SUPPORT CAPACITY
Newfoundland Model 2	Manuals are comprehensive except tenant relations.	Training is encouraged, seminars for regional office staff and training exercises to communicate program changes.	Task and frequency in maintenance section of program manual. No monitoring.	Regional level staff include area managers and maintenance managers.
Prince Edward Island FAMILY - Model 1 SENIOR - Model 2	Manuals are not comprehensive in both tenant relations and maintenance.	Budgeting for training not encouraged but would be considered. No other training communication methods.	Neither task or frequency except painting. No monitoring.	
Nova Scotia Model 1	Manuals are comprehensive except tenant relations.	Training is encouraged by the Dept. of Housing & Association of L.H.A.'s. Occasional seminars and workshops for managers & staff by the Department. Annual meeting of project managers.	Maintenance manual states task and frequency. No monitoring except informal random inspections.	Support from regional offices as well as technical support (administration, engineering, architecture) from Head Office.
New Brunswick Model 2	Manuals are comprehensive except tenant relations, but are not up-to-date.	Training is encouraged. Annual meeting of regional managers. No other means of training and communications.	No planned maintenance aside from cleaning of senior's common areas. There are maintenance technicians at regional office level, but no monitoring aside from periodic inspections.	Staff at regional and provincial - level aside from area property and maintenance managers are tenant relations officers in two of nine regions.

PROVINCE/TERRITORY	COMPREHENSIVENESS OF PROGRAM MANUALS	TRAINING AND COMMUNICATION	MAINTENANCE GUIDELINES	STAFF AT PROVINCIAL OR REGIONAL LEVEL - SUPPORT CAPACITY
Quebec Model 1	Manuals are comprehensive.	Training is encouraged. There are annual regional conferences on various subjects such as maintenance or employment codes. There are written materials for orientation and maintenance.	Cleaning and preventative maintenance tasks are recommended but frequency is not (an example for family and senior is shown). All projects inspected by maintenance technician every 18 months; report is filed and recommendations classified from urgent to preferable.	Advisors for management (12), technical (6), energy and preventive maintenance.
Ontario Model 1	Manuals are comprehensive.	Training is encouraged. Annual meetings for project managers within regions. Training offered by O.H.C.	Frequency charts give task and frequency.	Regional staff include area property managers and maintenance specialists. Provincial staff included.
Manitoba Model 1	Manuals are comprehensive.	Training is encouraged and taken to the L.H.A. level by the province. Seminars and newsletters for information exchange. Board also receives training.	Maintenance guidelines include task frequency and corrective measures. Monitored by regional inspectors.	Access to technical staff is limited. Regional staff (in five regions) of inspectors (2) and program officer can respond to manager's questions.

PROVINCE/TERRITORY	COMPREHENSIVENESS OF PROGRAM MANUALS	TRAINING AND COMMUNICATION	MAINTENANCE GUIDELINES	STAFF AT PROVINCIAL OR REGIONAL LEVEL - SUPPORT CAPACITY
Saskatchewan Model 1	Manuals are comprehensive.	Manager is responsible for training project staff. Manager and board receive training from regional administrators. Annual workshops for manager and some board members, bi-annual conference for everyone. Newsletter.	Maintenance guidelines are outlined in job description, (tasks only). Monitoring is a new initiative.	Regional staff include inspectors (5), financial managers (4) and administrators (5) who support the project managers.
Alberta Model 1	Manuals provide little support.	Manuals provide little support.	Managers are provided with little support.	Manuals provide little support.
British Columbia Model 2	Manuals are comprehensive on tenant relations. Other information is found in job descriptions and union agreements relating to maintenance and budgeting/financial.	New staff are trained by those to whom they report functionally and the area manager where appropriate.	Maintenance guidelines in job description. Monitoring is performed by area maintenance manager.	Regional staff include maintenance property management, and social/recreational group organizers.
Yukon Territories Model 1	Manuals comprehensive on tenant management, budgeting, financial, rent and eviction procedures. Not on maintenance (which is contracted) and tenant relations.	Program administrators give on-the-job training to managers and follow-up regularly. Three operational meetings per year between administrators and managers.	Maintenance is contracted, and preventative maintenance consists of quarterly maintenance visits to each unit. Work is checked by project manager	Program administrators (at regional offices) supervise and support project managers.

PROVINCE/TERRITORY	COMPREHENSIVENESS OF PROGRAM MANUALS	TRAINING AND COMMUNICATION	MAINTENANCE GUIDELINES	STAFF AT PROVINCIAL OR REGIONAL LEVEL - SUPPORT CAPACITY
Northwest Territories Model 1	Manuals are comprehensive.	Training is encouraged. On-the-job training is also provided by district office staff from program officer, accountant or maintenance coordinator.	Maintenance manual outlines all work to be performed, by month. Monitored by maintenance coordinator.	District offices have financial, maintenance, program and project coordinators who supervise and/or support managers. There are 12-15 people in each of the six district offices who administer the NWTHC programs (or joint programs) as well as supervise/support L.H.A.s.

MATRIX 2
TENANT/PROJECT MANAGEMENT INTERACTION (1988)

INDICATORS						OTHER INFORMATION		
			TENANT ASSOCIATIONS			PROJECT WITH MANAGERS REPORTING NO		
PROVINCE/ TERRITORY	PERCENTAGE PROJECTS WITH ON SITE OFFICE	LARGE L.H.A.S OR REGIONAL OFFICES HAVE COMMUNITY OR TENANT RELATIONS OFFICERS	FUNDED PARTICIPATION	ENCOURAGED BY STAFF	TENANTS ON BOARDS	DAY-TO-DAY CONTACT	REGULAR INTERACTION	SOME TENANT INVOLVEMENT
Newfoundland	1.8%	Yes	Yes	Yes	N/A	1.9%	22.4%	Grounds 54% Social 62% Office 0% Security 36% Vandalism 62%
Prince Edward Island	None	No	No	No	N/A Senior No Family	5.6%	4.5%	Grounds 93% Social 60% Office 0% Security 82% Vandalism 87%
Nova Scotia	7.6%	Yes	Yes	No	Permitted. No tenants at present.	14.2%	4.3%	Grounds 56% Socials 59% Office 2% Security 46% Vandalism 47%
Average	19.8%					11.7%	6.6%	

INDICATORS						OTHER INFORMATION		
PROVINCE/ TERRITORY	PERCENTAGE PROJECTS WITH ON SITE OFFICE	LARGE L.H.A.S OR REGIONAL OFFICES HAVE COMMUNITY OR TENANT RELATIONS OFFICERS	TENANT ASSOCIATIONS		TENANTS ON BOARDS	PROJECT WITH MANAGERS REPORTING NO		SOME TENANT INVOLVEMENT
			FUNDED PARTICIPATION	ENCOURAGED BY STAFF		DAY-TO-DAY CONTACT	REGULAR INTERACTION	
New Brunswick	3.2%	Yes	No	No	N/A	32.8%	16.1%	Grounds 26% Social 49% Office 3% Security 50% Vandalism 49%
Quebec	21.1%	Yes	Yes	Yes	Yes	21.3%	4.3%	Grounds 45% Social 64% Office 27% Security 49% Vandalism 67%
Ontario	12.5%	Yes	Yes	Yes	Yes	3.5%	2.4%	Grounds 43% Social 71% Office 7% Security 54% Vandalism 52%
Average	19.8%					11.7%	6.6%	

INDICATORS						OTHER INFORMATION		
			TENANT ASSOCIATIONS			PROJECT WITH MANAGERS REPORTING NO		
PROVINCE/ TERRITORY	PERCENTAGE PROJECTS WITH ON SITE OFFICE	LARGE L.H.A.S OR REGIONAL OFFICES HAVE COMMUNITY OR TENANT RELATIONS OFFICERS	FUNDED PARTICIPATION	ENCOURAGED BY STAFF	TENANTS ON BOARDS	DAY-TO-DAY CONTACT	REGULAR INTERACTION	SOME TENANT INVOLVEMENT
Manitoba	27.4%	Yes	Yes	Yes	1/3 are tenants	26.3%	8.3%	Grounds 69% Social 49% Office 9% Security 51% Vandalism 57%
Saskatchewan	10.3%	Yes	Yes	Yes Senior No Family	No	14.1%	14.7%	Grounds 62% Social 48% Office 3% Security 56% Vandalism 59%
Alberta	29.0%	Missing	Missing	Missing	Missing	9.9%	7.9%	Grounds 59% Social 44% Office 4% Security 46% Vandalism 48%
Average	19.8%					11.7%	6.6%	

INDICATORS						OTHER INFORMATION		
PROVINCE/ TERRITORY	PERCENTAGE PROJECTS WITH ON SITE OFFICE	LARGE L.H.A.S OR REGIONAL OFFICES HAVE COMMUNITY OR TENANT RELATIONS OFFICERS	TENANT ASSOCIATIONS		TENANTS ON BOARDS	PROJECT WITH MANAGERS REPORTING NO		SOME TENANT INVOLVEMENT
			FUNDED PARTICIPATION	ENCOURAGED BY STAFF		DAY-TO-DAY CONTACT	REGULAR INTERACTION	
British Columbia	56.6%	No	Yes	Yes	N/A	11.4%	6.9%	Grounds 44% Social 51% Office 15% Security 49% Vandalism 54%
Yukon	52.5%	No	Yes	Yes	Yes	0%	0%	Grounds 86% Social 24% Office 0% Security 100% Vandalism 100%
Northwest Territories	63.3%	No	Several local tenant associations are the L.H.A.s with less authority.		Yes	5.9%	1.3%	Grounds 53% Social 48% Office 9% Security 40% Vandalism 49%
Average	19.8%					11.7%	6.6%	

MATRIX 3
PROJECT MANAGEMENT STAFF, ACTIVITIES AND TRAINING (1988)

INDICATORS			OTHER INFORMATION			
PROVINCE/ TERRITORY	IHM OR IREM ACCREDITATION AND IN PROGRESS	PROJECT MANAGERS WHO HAVE TAKEN COURSES IN TENANT RELATIONS, BUDGET PLANNING, PROPERTY INSPECTION, TRADES	PROJECTS WITH ONLY ONE STAFF MEMBER (%)	WORK HOURS PERFORMED BY PROJECT MANAGER (%)	BREAKDOWN OF WORK HOURS PLANNING, SUPERVISING, MAINTENANCE, TENANT REQUESTS, OTHER (%)	TOTAL STAFF HOURS PER 100 UNITS
Newfoundland	0.0	Budget Planning 23% Tenant Relations 18% Property Inspec. 6% Trades 0%	14.8%	34.8%	Planning 24.6% Supervising 13.1% Maintenance 34.6% Tenant Requests 26.6% Other 1.1% 100.0%	25.5 13.6 35.9 27.6 - 102.6
Prince Edward Island	0.0	Budget Planning 72% Tenant Relations 52% Property Inspec. 44% Trades 39%	17.2%	49.7%	Planning 33.0% Supervising 8.9% Maintenance 27.8% Tenant Requests 30.3% Other - 100.0%	40.3 10.9 33.9 36.9 - 122.0
Nova Scotia	0.0 2% in progress	Budget Planning 44% Tenant Relations 32% Property Inspec. 30% Trades 44%	60.0%	56.4%	Planning 25.6% Supervising 9.4% Maintenance 31.0% Tenant Requests 28.0% Other 6.0% 100.0%	28.5 10.4 34.5 31.1 - 104.5
New Brunswick	0.0	Budget Planning 28% Tenant Relations 17% Property Inspec. 72% Trades 6%	37.5%	31.0%	Planning 20.1% Supervising 9.1% Maintenance 48.4% Tenant Requests 22.4% Other 0.0% 100.0%	17.8 8.1 42.9 19.8 - 88.6
Average			49.3%			107

	INDICATORS		OTHER INFORMATION			
PROVINCE/ TERRITORY	IHM OR IREM ACCREDITATION AND IN PROGRESS	PROJECT MANAGERS WHO HAVE TAKEN COURSES IN TENANT RELATIONS, BUDGET PLANNING, PROPERTY INSPECTION, TRADES	PROJECTS WITH ONLY ONE STAFF MEMBER (%)	WORK HOURS PERFORMED BY PROJECT MANAGER (%)	BREAKDOWN OF WORK HOURS PLANNING, SUPERVISING, MAINTENANCE, TENANT REQUESTS, OTHER (%)	TOTAL STAFF HOURS PER 100 UNITS
Quebec	0.4% accred. 0.2% in progress	Budget Planning 61% Tenant Relations 29% Property Inspec. 23% Trades 18%	11.5%	52.1%	Planning 30.7% Supervising 7.5% Maintenance 46.4% Tenant Requests 14.4% Other 0.9% 100.0%	37.6 9.2 56.9 17.6 - 121.3
Ontario	27% accred. 27% in progress	Budget Planning 66% Tenant Relations 74% Property Inspec. 59% Trades 64%	17.5%	43.6%	Planning 19.1% Supervising 11.6% Maintenance 43.9% Tenant Requests 24.1% Other 1.3% 100.0%	14.6 8.9 33.6 18.5 - 75.6
Manitoba	36% accred. 7% in progress	Budget Planning 48% Tenant Relations 50% Property Inspec. 48% Trades 39%	17.4%	49.9%	Planning 36.7% Supervising 4.7% Maintenance 38.3% Tenant Requests 18.8% Other 1.5% 100.0%	36.6 4.7 38.2 18.7 - 98.2
Saskatchewan	27% accred. 7% in progress	Budget Planning 43% Tenant Relations 42% Property Inspec. 42% Trades 39%	20.7%	54.0%	Planning 27.3% Supervising 6.8% Maintenance 44.4% Tenant Requests 21.5% Other - 100.0%	37.0 9.2 60.5 29.3 - 136.8
Average			49.3%			107

INDICATORS			OTHER INFORMATION			
PROVINCE/ TERRITORY	IHM OR IREM ACCREDITATION AND IN PROGRESS	PROJECT MANAGERS WHO HAVE TAKEN COURSES IN TENANT RELATIONS, BUDGET PLANNING, PROPERTY INSPECTION, TRADES	PROJECTS WITH ONLY ONE STAFF MEMBER (%)	WORK HOURS PERFORMED BY PROJECT MANAGER (%)	BREAKDOWN OF WORK HOURS PLANNING, SUPERVISING, MAINTENANCE, TENANT REQUESTS, OTHER (%)	TOTAL STAFF HOURS PER 100 UNITS
Alberta	2% accred. 0% in progress	Budget Planning 37% Tenant Relations 38% Property Inspec. 31% Trades 34%	23.6%	61.5%	Planning 28.7% Supervising 5.5% Maintenance 46.6% Tenant Requests 16.9% Other 2.3% 100.0%	39.1 7.5 63.4 23.0 - 133.0
British Columbia	28% accred. 53% in progress	Budget Planning 54% Tenant Relations 46% Property Inspec. 53% Trades 36%	12.4%	33.9%	Planning 21.5% Supervising 5.6% Maintenance 48.2% Tenant Requests 22.9% Other 1.8% 100.0%	15.8 4.1 35.4 16.8 - 72.1
Yukon	0.0	Budget Planning 15% Tenant Relations 0% Property Inspec. 0% Trades 0%	None	47.2%	Planning 23.3% Supervising 3.3% Maintenance 46.9% Tenant Requests 26.5% Other - 100.0%	27.0 3.8 54.3 30.7 - 115.8
Northwest Territories	0.0	Budget Planning 60% Tenant Relations 48% Property Inspec. 46% Trades 66%	None	35.7%	Planning 20.3% Supervising 31.7% Maintenance 21.2% Tenant Requests 26.8% Other - 100.0%	29.0 45.3 30.2 38.3 - 142.8
Average			49.3%			107

MATRIX 4
MANAGEMENT OF UNIT CONDITION (1988)

	INDICATORS		
PROVINCE/TERRITORY	1. **UNIT INSPECTIONS** 2. **TENANCY CHECKS**	1. **STAFF ON SITE** 2. **TENANTS METHOD OF CONTACTING**	**CONTROL OF BUDGET**
Newfoundland	1. Annual Unit Inspection. 2. No.	1. No project managers. Large projects have on-site maintenance staff. 2. Tenants call regional office-technician visits project to write work order.	Budget is controlled at regional office.
Prince Edward Island	1. Annual Unit Inspection. 2. Initial visit within a week of move-in and a follow-up within a month.	1. No staff on-site; all projects are small. 2. Tenants call project manager.	For family project, project manager controls. Senior projects are directly managed by PEIHC.
Nova Scotia	1. Annual Unit Inspection. 2. No.	1. Large projects have staff on site. 2. Tenants may contact project manager or maintenance staff.	By project manager except for very small L.H.A. where provincial managers will write the budget.
New Brunswick	1. Annual Unit Inspection. 2. No.	1. No project managers. No staff on site. 2. Tenants call-regular office and maintenance employees sent or work contracted.	Regional director manages the budget.

PROVINCE/TERRITORY	1. UNIT INSPECTIONS 2. TENANCY CHECKS	1. STAFF ON SITE 2. TENANTS METHOD OF CONTACTING	CONTROL OF BUDGET
Quebec	1. Annual Unit Inspection. 2. No.	1. Large projects have staff on site. For all projects, the manager is on site at some time during the week. 2. Tenant may call project staff or L.H.A.	Project manager controls the budget.
Ontario	1. Annual Unit Inspection. 2. No.	1. Large projects have staff on site. All projects have staff on site at sometime during the week. 2. Tenants call maintenance or project manager.	Project manager controls the budget.
Manitoba	1. Annual Unit Inspection. 2. No.	1. Large projects have staff on site, otherwise project manager is in the community. 2. For large L.H.A.s; requests are processed through on-site maintenance staff to P.M.	Project manager controls the budget with the board.
Saskatchewan	1. Annual Unit Inspection. 2. Tenancy check after 3 months	1. Large projects have staff on site, small have manager in community. 2. Tenants call the caretaker in large projects and manager in small.	Project manager controls the budget.

PROVINCE/TERRITORY	1. UNIT INSPECTIONS 2. TENANCY CHECKS	1. STAFF ON SITE 2. TENANTS METHOD OF CONTACTING	CONTROL OF BUDGET
Alberta	1. Not available. 2. Not available.	1. Not available.	Unknown whether it is at L.H.A. or project level.
British Columbia	1. Annual Unit Inspection. 2. No.	1. No project managers on site. Caretakers on site for large projects. Schedule of caretakers known to tenants for small projects and property manager visits once a week. 2. Tenants request to caretaker (if on site) or property manager (who takes calls every morning).	Regional office (property manager and area director) controls the budget.
Yukon Territories	1. Semi-annual Unit Inspection. 2. Quarterly maintenance visits.	1. Managers are in communities. 2. Tenant may call manager or contractor (in case of emergency repair).	Project managers (administrators) control the budget.
Northwest Territories	1. Semi-annual Unit Inspection. 2. Occasional visits are recommended.	1. Managers are in the communities. Someone is always on call. 2. Tenants call the administrator (manager).	Project manager controls dispersals but may not prepare the budget.

MATRIX 5
MANAGEMENT OF PROJECT CONDITION (1988)

PROVINCE/ TERRITORY	INDICATORS				
	M&I PLANS	REPORTING OF REPAIR COSTS TO UNITS & EQUIPMENT, PREVENTATIVE MAINTENANCE PERFORMED	MONITORING OF MAINTENANCE PRACTICES	PRIORITIZING M & I PERCENTAGE OF PROJECTS WITH MANAGERS USING: PHYSICAL INSPECTORS	PRE-SET SCHEDULES
Newfoundland	Three year M&I plans by region. Due to budget restraints, funds are prioritized.	Work is recorded by unit, but not reported for review.	No. Informal review of condition on a quarterly basis.	86.9%	88.6%
Prince Edward Island	No.	No.	No.	89.5%	27.9%
Nova Scotia	No.	No.	No. Informal random inspection.	86.1%	74.0%
New Brunswick	Three year M&I plans by region. Work is prioritized based on unit inspections.	No.	No.	87.1%	24.2%
Quebec	Three year M&I plans submitted by each LHA (Began in 1987)	Yes.	Projects inspected every 18 months by maintenance technician.	51.0%	41.6%
Ontario	Three year M&I plans submitted by each LHA and reviewed by manager.	Yes.	Maintenance is monitored by area manager.	89.5%	69.9%
Average				80.3%	56.6%

PROVINCE/ TERRITORY	M&I PLANS	REPORTING OF REPAIR COSTS TO UNITS & EQUIPMENT, PREVENTATIVE MAINTENANCE PERFORMED	MONITORING OF MAINTENANCE PRACTICES	PRIORITIZING M & I PERCENTAGE OF PROJECTS WITH MANAGERS USING:	
				PHYSICAL INSPECTORS	PRE-SET SCHEDULES
Manitoba	No.	No.	Monitored by regional inspectors.	77.5%	47.5%
Saskatchewan	LHAs are encouraged to develop 4 or 5 year plans. The province reviews budgets and prioritizes where necessary. Initiatives in 1988 to inspect and prioritize with a three year maintenance plan.	No.	Monitoring is a new initiative. The project manager and a Board member or inspector will do inspections. Objective is to do more timely maintenance.	77.5%	63.7%
Alberta				74.7%	24.4%
British Columbia	The capital maintenance plan is for three years covering M&I and repair/replace. It is based on unit inspections and ongoing needs review by area property and M&I managers.	Yes. For preventative maintenance.	Area maintenance manager performs monitoring of project level activity.	87.6%	55.9%
Average				80.3%	56.6%

PROVINCE/ TERRITORY	M&I PLANS	REPORTING OF REPAIR COSTS TO UNITS & EQUIPMENT, PREVENTATIVE MAINTENANCE PERFORMED	MONITORING OF MAINTENANCE PRACTICES	PRIORITIZING M & I PERCENTAGE OF PROJECTS WITH MANAGERS USING:	
				PHYSICAL INSPECTORS	PRE-SET SCHEDULES
Yukon Territories	Five year capital plan budgets are required. Presently, lower priority work has to be deferred in order to get condition up to par.	The program administrator receives reports from L.H.A. on operations and maintenance.	No.	83.3%	71.9%
Northwest Territories	Four year M&I plans by LHA, based on inspections. Work will be prioritized and budget can be re-allocated within the community.	No.	Implementation of the new (1988) maintenance management program is being monitored by Program Officer in District Offices.	88.7%	54.4%
Average				80.3%	56.6%

MATRIX 6
MANAGEMENT PLANNING (1988)

PROVINCE/ TERRITORY	INDICATORS				
	REPORTS ON OCCUPANCY, ARREARS, PHYSICAL CONDITION, WAITING LIST AND CLIENT PLACEMENT	GOALS ESTABLISHED FOR RE-LET TIMES, RENT ARREARS, OCCUPANCY, IMPROVEMENTS, INSPECTIONS	MONITORING AND EVALUATION	FINANCIAL REPORTS ON RENT COLLECTION AND ARREARS, BUDGET TRACKING, REPAIR COSTS	PERFORMANCE APPRAISAL
Newfoundland	Monthly reports on arrears, units vacated, repair or reoccupancy expense and date of reoccupancy.	Yes. Goals are established annually for all of the above.	Yes. Monthly comparisons through the reporting system.	Head Office controls all finances.	No.
Prince Edward Island	No.	All of the above are discussed at an annual provincial workshop.	No.	No. Budgets are reviewed on an informal basis and periodic reviews made to ensure that procedures are followed.	No.
Nova Scotia	Quarterly reports on vacancy loss and arrears and applications.	No.	Yes.	Reports are prepared on all of the above after the third and sixth month and every month thereafter in the budget year.	Regional managers monitor performance and conduct an annual management review.
New Brunswick	Monthly vacancy and arrears reports.	Not a formal process.	Yes. Vacancy and Arrears.	Arrears and vacancy.	No.
Quebec	Monthly reports on occupancy and arrears.	No.	Yes.	There are monthly reports on arrears and interim and annual reports on the other three.	No.

PROVINCE/ TERRITORY	REPORTS ON OCCUPANCY, ARREARS, PHYSICAL CONDITION, WAITING LIST AND CLIENT PLACEMENT	GOALS ESTABLISHED FOR RE-LET TIMES, RENT ARREARS, OCCUPANCY, IMPROVEMENTS, INSPECTIONS	MONITORING AND EVALUATION	FINANCIAL REPORTS ON RENT COLLECTION AND ARREARS, BUDGET TRACKING, REPAIR COSTS	PERFORMANCE APPRAISAL
Ontario	Reports on occupancy, arrears waiting lists and client placements. Reports on physical condition in exceptional cases.	All of the above.	Monitoring is done monthly by regional office. Evaluation is done annually at provincial office.	Monthly to regional office.	Yes.
Manitoba	Monthly reports on arrears and debts, vacancy losses, waiting list turnover. Quarterly drawing together for monitoring.	No.	Yes. Based on monthly and quarterly reports.	Monthly reports on rent collection, arrears, expenditures and revenues. Variance reports quarterly on budget.	No.
Saskatchewan	Monthly reports on all of the above.	No.	Constant evaluation through reports but not compared.	Quarterly vacancy loss and arrears, and expense distribution report monthly repair costs.	No.
Alberta	Monthly reports on arrears.			Monthly reports on all of the above.	
British Columbia	Monthly reports on occupancy.	No.	Yes. Monthly review.	Monthly reports on arrears and budget tracking.	No.

PROVINCE TERRITORY	REPORTS ON OCCUPANCY, ARREARS, PHYSICAL CONDITION, WAITING LIST AND CLIENT PLACEMENT	GOALS ESTABLISHED FOR RE-LET TIMES, RENT ARREARS, OCCUPANCY, IMPROVEMENTS, INSPECTIONS	MONITORING AND EVALUATION	FINANCIAL REPORTS ON RENT COLLECTION AND ARREARS, BUDGET TRACKING, REPAIR COSTS	PERFORMANCE APPRAISAL
Yukon	Monthly report on all of the above except arrears which is bi-monthly.	No.	No.	Bi-monthly on rent collection and arrears. Monthly reports on budget and operations and maintenance.	No.
Northwest Territories	Monthly reports on all of the above.	No.	Yes. Constant comparison through reports.	Monthly report on arrears.	No.

APPENDIX H

MEASURES OF ASSOCIATION BETWEEN COMPOSITE INDICATORS OF MANAGEMENT PERFORMANCE AND PROJECT CONDITION
ALL PROJECTS

COMPOSITE INDICATOR	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Support	48.9	0.0	0.216	0.288	997
Tenant	37.9	0.0	0.191	0.115	997
Staff*	56.1	0.0	0.231	0.424	997
Unit	123.4	0.0	0.218	0.481	2468
Project	36.0	0.0	0.187	0.144	997
Plan	50.3	0.0	0.219	0.313	997

* With unit condition

ALL PROJECTS*

COMPOSITE INDICATOR	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Support	23.7	0.0	0.152	0.292	997
Tenant	29.3	0.0	0.169	0.102	997
Staff**	53.8	0.0	0.226	0.454	997
Unit	92.6	0.0	0.190	0.571	2468
Project	28.8	0.0	0.168	0.130	997
Plan	49.6	0.0	0.218	0.379	997

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

** With unit condition

FAMILY-FAMILY/SENIORS PROJECTS*

COMPOSITE INDICATOR	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Support	11.9	0.0	0.146	0.254	551
Tenant	12.0	0.0	0.146	0.234	551
Staff**	14.8	0.0	0.162	0.375	551
Unit	45.3	0.0	0.183	0.705	1305
Project	19.1	0.0	0.183	0.061	551
Plan	37.3	0.0	0.252	0.509	551

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

** With unit condition

SENIORS PROJECTS*

COMPOSITE INDICATOR	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Support	28.0	0.0	0.244	0.438	441
Tenant	28.5	0.0	0.247	0.247	441
Staff**	48.7	0.0	0.315	0.605	441
Unit	69.9	0.0	0.239	0.597	1151
Project	39.0	0.0	0.285	0.349	441
Plan	38.8	0.0	0.284	0.473	441

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

** With unit condition

COMPOSITE INDICATOR: SUPPORT*

PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Pre-1964	-	-	-	-	-
1964-69	-	-	-	-	-
1970-74	16.8	0.0	0.216	0.579	343
1975-79	8.9	0.01	0.165	0.290	319
1980-87	13.9	0.0	0.277	0.445	167

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: TENANT*

PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Pre-1964	-	-	-	-	-
1964-69	2.9	0.22	0.174	0.290	96
1970-74	13.8	0.0	0.196	0.299	343
1975-79	10.4	0.01	0.178	0.138	319
1980-87	18.7	0.0	0.317	0.242	167

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: STAFF*

PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Pre-1964	-	-	-	-	-
1964-69	0.8	0.36	0.092	0.238	96
1970-74	41.4	0.0	0.328	0.698	343
1975-79	21.9	0.0	0.253	0.498	319
1980-87	24.0	0.0	0.355	0.802	167

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: UNIT (WITH UNIT CONDITION)*

PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Pre-1964	-	-	-	-	-
1964-69	-	-	-	-	-
1970-74	39.9	0.0	0.208	0.645	881
1975-79	45.6	0.0	0.234	0.669	785
1980-87	45.8	0.0	0.340	0.688	350

* Unit condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: PROJECT*

PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Pre-1964	-	-	-	-	-
1964-69	1.7	0.43	0.131	0.138	96
1970-74	4.4	0.11	0.113	0.225	343
1975-79	12.9	0.0	0.197	0.217	319
1980-87	17.7	0.0	0.309	0.373	167

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: PLAN*

PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Pre-1964	-	-	-	-	-
1964-69	4.9	0.09	0.220	0.348	96
1970-74	33.6	0.0	0.299	0.539	343
1975-79	36.2	0.0	0.319	0.504	319
1980-87	15.5	0.0	0.292	0.524	167

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: SUPPORT*

CLIENT TYPE/ PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
NO VALID TEST: Family * CLIENT TYPE					
Senior/1970-74	15.7	0.0	0.334	0.708	125
Senior/1975-79	10.1	0.0	0.221	0.368	198
Senior/1980-87	20.1	0.0	0.399	0.647	106

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: TENANT*

CLIENT TYPE/ PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Family/1975-79	5.0	0.08	0.200	0.512	119
Family/1980-87	0.9	0.63	0.124	0.094	59
Senior/1970-74	12.0	0.0	0.296	0.523	125
Senior/1975-79	12.0	0.0	0.239	0.189	198
Senior/1980-87	23.6	0.0	0.427	0.478	106

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: STAFF*

CLIENT TYPE/ PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Family/Pre-1964	9.8	0.0	0.346	1.000	72
Family/1964-69	0.7	0.39	0.093	0.242	84
Family/1970-74	9.2	0.0	0.202	0.521	217
Family/1975-79	0.2	0.66	0.040	-0.016	229
Family/1980-87	2.6	0.10	0.207	0.471	59
Senior/1970-74	14.8	0.0	0.326	0.670	125
Senior/1975-79	29.2	0.0	0.357	0.677	198
Senior/1980-87	21.4	0.0	0.410	0.938	106

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: UNIT (WITH UNIT CONDITION)*

CLIENT TYPE/ PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Family/Pre-1964	8.0	0.0	0.201	1.000	192
Family/1970-74	23.4	0.0	0.205	0.636	535
Family/1975-79	10.8	0.0	0.177	0.861	337
Family/1980-87	9.5	0.0	0.277	0.733	115
Senior/1970-74	13.1	0.0	0.192	0.618	342
Senior/1975-79	58.3	0.0	0.341	0.754	442
Senior/1980-87	49.4	0.0	0.418	0.779	233

* Unit condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: PROJECT*

CLIENT TYPE/ PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Family/1970-74	4.7	0.09	0.146	0.124	217
Family/1975-79	2.3	0.32	0.138	-0.028	119
Senior/1970-74	16.7	0.0	0.343	0.575	125
Senior/1975-79	23.2	0.0	0.324	0.302	198
Senior/1980-87	15.9	0.0	0.362	0.407	106

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

COMPOSITE INDICATOR: PLAN*

CLIENT TYPE/ PROJECT AGE	CHI-SQUARE	PROB	CONTINGENCY COEFFICIENT	GAMMA	n
Family/1970-74	13.9	0.0	0.246	0.588	217
Family/1975-79	10.8	0.0	0.288	0.632	119
Family/1980-87	3.8	0.15	0.246	0.377	59
Senior/1970-74	12.5	0.0	0.302	0.486	125
Senior/1975-79	29.4	0.0	0.359	0.515	198
Senior/1980-87	21.6	0.0	0.411	0.764	106

* Project condition ratings have been dichotomized into fail/meet and exceed for the purpose of this analysis

LOGISTIC REGRESSION MODEL OF PROJECT CONDITION
ALL PROJECTS

MODEL	MODEL CHI-SQUARE (-2 LOG LIKELIHOOD RATIO)	PROB.	R	n
Cl Age	125.8	0.00	0.264	995
Cl Age support	17525	0.00	0.311	995
Cl Age tenant	161.3	0.00	0.298	995
Cl Age staff	214.0	0.00	0.345	995
Cl Age project	157.2	0.00	0.294	995
Cl Age plan	206.7	0.00	0.339	995
Cl Age plan staff	248.1	0.00	0.371	995

WHERE:

Cl = 'Type of client'

with 0 = family or family/senior project
1 = seniors project

Age = 'Project age'

with 0 = 1 to 10 years
1 = 11 to 15 years
2 = 16 to 25 years
3 = over 25 years

SUPPORT is the composite indicator of comprehensiveness of support to project management.

TENANT is the composite indicator of tenant/project management interaction.

STAFF is the composite indicator of project management accreditation and training.

UNIT is the composite indicator of management of unit condition.

PROJECT is the composite indicator of management of project condition.

PLAN is the composite indicator of management planning.

APPENDIX I

CONSUMER PRICE INDEX FOR HOUSING 1979-86

YEAR	CONSUMER PRICE INDEX (HOUSING)	INFLATION FACTOR (1)
1979	82.3	1.6148
1980	89.0	1.4933
1981	100.0	1.3290
1982	112.5	1.1813
1983	120.2	1.1057
1984	124.7	1.0658
1985	129.0	1.0302
1986	132.9	1.0000

SOURCE: Canadian Housing Statistics, Page 79, CMHC, 1988.
NOTE: 1 Factor used to convert public housing operating costs to 1986 dollars.